

BLM Wild Horse & Burro Advisory Board Meeting
August 25, 2014 - Morning Session

>> Boyd Spratling: Good morning.

I'd like to welcome you to the National Wild Horse & Burrow Advisory meeting.

We're glad to be in the meeting.

To start with, I would like to ask the board to introduce themselves.

Where are you from?

>> Thanks, Boyd.

Good morning, my name is -- I'm the main advocate on the board.

>> Sue McDonald: I'm Sue McDonald from Pennsylvania and I represent research.

>> I'm Rick Danvir.

I'm a wildlife management representative and I'm from Casper.

>> I'm John Falen.

>> Callie Hendrickson from Callie Hendrickson from Colorado.

>> I'm June Sewing.

I am from Utah and I am the wild horses advocate.

>> Joan Guilfoyle: Good morning.

I'm Joan Guilfoyle.

>> Kathie Libby: And to my right, you will be introducing BLM staff.

Good morning everyone.

It's always, always a pleasure.

This is answer advisory board meeting for BLM Wild Horse & Burros program.

The public is invited to these programs because of our precious for what you bring, your dedication, your information, your advocacy.

So we welcome you here.

At the end of today I always like to start with the end in mind, and at the end of today, not quite the end, we will have a public comment period actually right after lunch so from 1:00 to 2:30 we'll go to the public comment period.

And you came in, you signed in, and if you are interested in participating in the public comment period, you will have indicated that to us.

We will take the one and a half hours and divide it by the number of people who wish to speak and come up with the magical number of how many minutes or second you actually end up with.

It tends to be three minutes.

And we'll go over how we manage that.

But we'll take a look, maybe even just before lunch about what that might look like but do be prepared exactly after lunch to come in and use that public comment period.

So that's where we are now.

We will, after some opening remarks by Greg Shoop.

We will have a very nice kind of PowerPoint, a very nice introduction to Wyoming, and Don Simpson is here.

He is the Wyoming state director, and he is accompanied by our state Wild Horse & Burros league and they will give us information on the wild horse program in Wyoming. We will then turn the meeting over to the board, and there are a series of events. I believe these agendas are in the back of the room so I won't go through all of the details but we'll go over the meetings from the last meeting, some information from the advisory board charter.

There are some recommendations, the board makes recommendations to BLM after every meeting and so we will review BLM's response to the board meeting last April. Joan Guilfoyle accompanied by Holle' Hooks on the phone will give a general program update from about 9:20 to 10:00 at which time we will take a quick break, and I should advise you of two things.

Out the door I believe to the left, but I could be wrong about that, heading order the find court, you will find a food court you will find a ladies and gentlemen room.

So we'll take a break.

That will be a 20 minute break.

We will hopefully start it at 10:00 and end it at whatever 20 minutes comes to.

Ryan Holt is here from the Washington office of BLM and he's going to give us an update on their program.

Larry Imler is here from the Forest Service and he's going give us an update on Forest Service activities.

And at 11:20 we are very pleased to have Dr. Steven Petersen who is from Brigham Young University who will talk to us about fundamentals of range management.

Lots and lots of information this morning.

We'll break at for lunch at noon and take a one-hour break at which point, as I mentioned, let -- is that me making all that noise?

Is that June making all that noise?

Immediately after lunch having all the information we will do the public comment period, following which, following which we will have yet another break, and then the working -- then the board really has individual session.

People stop talking to it and they start talking to each other.

And they have had some work going group progress and they will coming up with addition recommendations to the BLM and we anticipate closing at 5:30.

So again, we welcome you.

We welcome you whether you are on the Internet or here physically.

Do we need to say anything, art, about the Internet connection or -- perfect.

Loving it.

So if you're in the room, there are a couple of things I have to tell you.

We do have some rules of the room which we wrote up a couple of years ago.

I confess, I looked through them again this morning and they aren't terribly worthy but I would like to review a few things.

First of all want ladies sitting in the front room, we didn't get to tell you this before you set up, there are some designated areas for people for the media and for people just regular human beings with cameras because it's helpful to get those things out of people's sight line, so this is actually a designated area for cameras that you're sitting in.

If you got some competition, you want to move.

Maybe this gentleman in the back.

But, no.

And this is the other designated area here.

Are you okay, sir?

Are you okay?

You're good.

Yes, we do want to set up those separate areas.

The media is asked to check in at the door, and again we.

It is a board meeting, and it would make it a little more challenging for anybody who wanted to directly engage with the board, but we do ask that you go and approach the dais, that if you have handouts that you want to show at the board that you leave them at the back of the room and we will ensure that those get distributed.

We do ask out of respect for all of us in our ability to listen and hear today, that if you've got a cell phone you know what to do with it and keep your individual conversations to a minimum because they make it distracting for someone else to hear.

We already talked about signing up at the door.

The board will not, as you make your public comments today, the board will not respond as you go to them.

Please understand that is not a matter of disrespect or of lack of interest in what you're saying.

It's just a matter of we need to save that time for the public to speak, so it's not a dialogue with the board directly.

If there are factual enactors, we understand factual enactors we may make a comment about those later.

And we just have these rules because we really want this kind of session to work for the board and for the public and so we're going to try to approach this today.

We welcome you all again.

And I'm going to turn it over to Greg.

>> Thank you.

I was told I have to get close or you're going to throw something at me.

Guys, it's great to see you all again.

Great to spend time with you all and welcome to all of you folks here and all of you

across the planet who are watching in.

We had a great day yesterday.

Got to see horses, got to see antelope.

If I get the attribution, forgot it for now.

But as I understand it this is something the Governor said he would like to say, a picture is worth a thousand words is actually seeing something is worth a thousand pictures, and I personally had that sense yesterday.

It was a great opportunity for us to get out there and see some horses with these guys in Wyoming, see what they're dealing with.

Although I will say I have to agree with John we saw some great country that just happened to be in really great shape this year because of the rain they got last fall, so we didn't exactly see -- what we saw yesterday is not typical of a lot of the HMA managing but I would say the resource managing is good.

I hope the guys have an appreciation for what you guys are doing out here on the ground.

We got wind blown and a little sun.

But it was good.

Apparently I need to introduce some folks who are here.

I'm going to limit my introductions to the Washington program staff.

Don, I'll let you introduce the Wyomingers.

John if I miss somebody jump in.

Sarah in the back on the Washington program staff and Zach Reichold who was sitting up front but he left the room.

You will get to meet him later because he's going to update you on a lot of research stuff that we're doing.

With that I'm going to end off and just with a welcome and introduce Don Simpson, our Wyoming state director who gets to take credit for all the good stuff we saw yesterday.

Don, without further ado, over to you.

By the way, just so you know, this is my favorite guy on the stage.

This guy right here.

>> Don Simpson: Can you guys see the screen from back there?

The district manager up in the big horn.

The district manager in high desert down in Hot Springs.

Thank you folks for coming.

What I'd like to do is just welcome the board to Wyoming and welcome you folks to Wyoming, so bear with me.

Take it away.

Okay.

So I think a lot of you folks, as you did the tour yesterday, you probably got the hang of it.

You got a lot of high elevation, a lot of low elevation, a lot of moisture in the areas. There is the mean elevation of Wyoming 6700 feet second to Colorado.

Back to back you've got two highest elevations in the country.

You can see the highest point in Wyoming, Gannett peak, you probably saw that.

Next slide.

We're the smallest state in the country.

Welcome.

5.8 people per square mile, U.S. average is 87.3.

I remember when I was in Phoenix it felt like 187.3.

Welcome to the smallest populated state in the country and at last count or animal population.

Here's how small Wyoming next slide.

Wyoming only has historic interests.

A lot of firsts in Wyoming.

First state to allow women to vote, first county public library system, first night lighted football game, first woman Governor.

And from the public standpoint I want to transitioning into public land side of this.

The first national forest.

First national monument.

And to bring it home to BLM in the '30s, '40s we managed grazing district, the very first grazing district.

I want to bring up rank here.

I know as you go out driving around with the ranches, Wyoming has the largest ranch size in the country.

3800-acre average.

The economy, I don't know how much energy development you calm across yesterday on the tour but at some point the driver.

You can stay an extra day.

I know the tourism director would appreciate that.

The third largest in agriculture and we're one of the few states if the country that actually don't have estate tax.

I want to shift to BLM Wyoming.

There are the major towns that we have offices in.

We have ten field offices and then Cheyenne is our state office.

Next slide.

This will give you a little look at the surface ownership.

Anything in green in the far northwest corner, south of that is Tetons.

The rest of the green in the state is national forest.

All of the jell surface land managed land.

We manage about 18 million surface acres.

We have about 740, \$100 million budget.

We take that \$100 million and turn it into 2 billion-dollar that goes into a separate treasury from receipts from oil and gas.

Before I go to the next slide I want to focus your eyeball in the northeast corner of the state.

There are federal surface a little bit of green.

If you go to the next slide, there's the mineral ownership.

Now all of a sudden you're starting to see why we're making \$2 billion a year.

The northeast corner of the state has what we call -- so the United States government owns the mineral, a private entity.

As we work up in that state area.

Next slide.

So as you saw that map, part of that is homestead acts.

Sometimes it's easier to manage a small plot.

The homestead authority said they have to reserve mineral estates.

And then if you look at that graph on the right or that map on the right, that railroad check, the Congress gave them the center line.

They also gave them 20 miles on each side of the center line and every other section.

Every other section is private land to be used by the railroad to generate cash for the railroad.

To this date we get to manage that checkered space.

Okay.

Next slide.

What I'd like to do now is turn the discussion over to June so we can transition to the conversation about horses.

>> June Sewing: Remember that checkerboard that Don went over.

I'll get to that in a minute.

All right.

This is the Wyoming wild horse and burro program and we're second only to the Nevada Wild Horse & Burro program.

3,771 this year.

Don't manage any horses, just burros.

These are managed by the rock springs field office, the lander field office, up in boy island and the Cody field office.

The statewide BLM there are 4,490 to 3,725.

We have a multitude of facilities in Wyoming that we work with just as the contract facility in Wyoming, Hugh mantle and his friends.

We train them and offer them for adoption on the Internet or you can make an appointment, go there to visit and pick out a horse or we have adoption throughout the state that we bring horses to you.

We also have a partnership with the Wyoming honor farm, the state prison and this program has been going on for 26 years.

This is a win-win for the horses, the prisoners, and the adopters, offering trained horses that have been handled by a multitude of people that benefit, the prisoners benefit by learning and the horses get the training, and then the adopter is successful with an animal that they can take home and work with quickly.

We also have our boarding facility in box springs.

This is a facility that receives the horses after the gather.

They get them ready for adoption or send them, depending on their age.

This facility's capacity is about 700.

We also have the first BLM sanctuary in Wyoming, it's a 4,000 family owned ranch.

It's 38 miles west of layer me.

It's got almost 300 horses on it, a and we're doing really good.

It's been a really successful program.

They have given horses to 300 to 400 people in the last couple of years.

And it's a wonderful place to go see some horses and the horses are really living it up.

We also have a sanctuary just outside of landberger or lander.

And in that process of it's in the process of being looked at and reviewed, and it's looking like it's going to be a good possibility, and the first horses may arrive this fall.

So hopefully it will go through and it will be another successful place to place horses.

So remember that checkerboard that Don introduced earlier.

We're going to have -- this is what's happening this year.

We have a wild horse gather is the checkerboard.

Adobe.

You can see the acreage there.

You can see the difference between what's private and what's public.

And the private lands are owned and controlled by rock springs.

Here's a better look at the management area and you can see how almost half of it is checkerboard.

And then here's the adobe salt wells.

Very small portion of adobe town in checkerboard but the majority of salt wells is.

Here's the numbers that were presented for gathering.

From the census flight in 2014.

And we just did those and they were done to the classification that has been put forward simultaneous double count method has used.

So what we've done so far this year.

We have adopted 103 horses burros.

22 of those have been at the Wyoming honor farm, and we're getting ready to have another adoption there on September 5th, and then there was 11 out of the rock springs holding facility and eight were done during China cure days and 17 during the

state fair.

Horses were adopted on the Internet.

So we have horses all over the United States thereon that program.

The rock springs holding facility was the hostess with the mostest this year.

They opened their doors to the national high school finals rodeo and they had visitors from 47 states.

615 people came through the rock springs facility and visited and they adopted horses, too.

There's the crew at the rock springs.

We also had a wild horse rescue this year.

Our wild horse and burro specialists out of rock springs, Jayton ward and his family rode into looking for a peaceful day and ended up finding a friend that had broke her ankle, Alisha had fallen and broke her ankle and they couldn't figure out how to get her out of there, so a wild horse hauled her out to safety and had to eventually flight her out.

He is doing great and they only life flighted her because of signs of shock.

But it was a very successful thing, and one of the great qualities of that horse is that he was calm, big enough to handle and it he walked really gentle.

So with that, that's all that we have, and thank you for your attention.

If you have any questions.

We have to wait for that to come online but --

Non-audible question]

>> The ecosanctuary, it has -- and depending how the evaluation comes.

>> Offices have helped out with yesterday's tour, it's very instructional for all the members to see its resource and impacts, especially wild horses.

We saw a lot of game and it was a good day.

The resources are in good shape and I think we have to congratulate the Wyoming BLM for actively managing those wild horse herds, and I think it shows the, the resource shows that they have been actively managed, and I think that's what we're looking for in the west is what we're seeing in Wyoming.

So I want to thank the Wyoming, especially.

Lander office for helping out with that.

With that we'll move on to approval of minutes from the April 2014 meeting.

Everybody has had a chance to go through those, especially the executive summary.

Any corrections to those that anybody might offer?

We approve the minutes from the April 2014 minutes.

Any discussion, additions, subtractions, corrections?

If not, all those in favor say aye.

Opposed nay.

It passes.

They are approved.

Okay.

Next down the line, we're going to have Sarah talk about the advisory board SOP and charter.

>> Good morning.

The charter and the SOPs are in tab 3 of your binder.

The charter is a two-year document and it was just reviewed in July, so the current charter will now expire in July of 2016.

There are two changes I wanted to highlight in the new charter.

One is in the membership and designation section.

We've made some changes to make it very clear that two of the nine board positions are public interest positions.

We have listed those out separately.

They were combined into one so it was a little confusing and we've noted in each, that one of them is a public the interest position with the focus on equine behavior and the second is a public interest position with special knowledge of wild horses and burros, wildlife management, animal husbandry or natural resource management.

The other change I wanted to note to the charter is in the authority section, the department added they have references to different parts of regulars in that first authority section at the very beginning of the charter and they added one additional reference to the portion of the BLM regulations for advisory boards that require a quorum for a meeting to be conducted.

While the charter is a document that is maintained by the department, the SOPs are the board's document, and I wanted to invite any discussion, questions or thoughts if any changes to the SOPs either now or during your discussion period later on.

>> Boyd Spratling: Any questions for Sarah?

Basically we have been making it a practice to look at and discuss the charter at each meeting, so I think probably we're kind of up to date on where we sit with the status of those documents.

If there are no further questions.

Thank you, Sarah, very much.

We're way ahead of schedule.

Next will be the BLM response to advisory board recommendations, and Joan Guilfoyle our chief will take care of that.

>> Joan Guilfoyle: All right.

Thank you, Boyd.

I, too, wanted to thank the Wyoming people for being such gracious hosts for us for this meeting today.

This first time, at least in my three years of being the division chief and I think looking back that we have actually, in the records that we have come to a community of this

size and gotten to really close to the real ground action where everything is happening, and so I'm just delighted it's worked out that and we're here, and I hope that the folks who live closer to Riverton, Wyoming, than to D.C. or someplace else and have been able to take advantage of us being here.

So thank you again are for being hosted in Wyoming to us.

I wanted to add a couple of people to introduce, if I could.

In addition to Sarah and Zach and Kathie Libby, Dr. Kane is with us, he's our veterinarian, does a great job, and we appreciate him being here and also there's two Forest Service people.

I see at least one of them in the room and I usually like to introduce them as well and Tom Foley I see in the front row here.

Is Barry here?

Barry Imler from the Washington office.

Tom is out in Nevada.

The Forest Service folks who are on the agenda as well.

And I wanted to double-check that some of my folks who are not in the room are on the telephone, so I don't know if I can do that.

Kathie.

Dean Bolstad, are you on the line?

[Via telephone]

I am.

>> Dean is a senior adviser to me in Washington.

The Holle' Hooks on the line?

>> I am.

Good morning.

>> Holle' is our biology chief who will be giving a report to you in a little bit.

And Terese Johnson, are you on the line?

Okay.

The research segment is later so she may not have dialed in yet.

Terese is our acting research coordinator out of Fort Collins so she's going to be on the line to see if any more update is needed.

For the advisory board recommendations if you want to turn to tab four, that's what we're going to be looking at first of all, and you should have in there the recommendations that you gave us at the April meeting.

Recommendations one through 13 were all working group recommendations.

This person be in this group, this person in this group, et cetera.

We accepted them all.

And if you want to refresh your memory of who is on which working group, that is under tab 8.

There's a complete list up to date.

So it's the BLM working groups and the board formal working groups and who's on each of them.

That's under tab 8.

We accepted all of your recommendations for that.

>> Joan, would you mind reading the recommendation or just give a summary of it so we have an idea what's going on.

>> I can go through each one.

Do you want me to do that, Boyd?

>> Please, if you have time.

>> There's 14 of= them but it will be like the Bible, beget, beget.

There's a lot of names.

Recommendation number one was that the board recommended that Dr. Sue McDonald replace Dr. Bray on the BLM comprehensive animal welfare program working group.

That was accepted.

Recommendation number two was that the board recommended that Fred will replace Julie Gleason and add John Falen to the BLM formed increasing adoptions working group.

That was accepted.

Recommendation number 3 was that the board recommended Fred Woehl be added to the BLM ecosanctuary working group.

That was accepted.

Number four was that the advisory board recommended that Rick Danvir replace Julie on the ecotourism working group.

Accepted.

Recommendation number five was that the board recommended that the advisory board formed -- this is a long title for this working group -- established criteria for evaluation of the HA-HMA suitability of herd reintroduction working group.

That was helped.

Recommendation number 6 was that the board recommended that Dr. Sue McDonald replace Dr. Bray on the advisory board formed herd area repopulation working group.

Recommendation number seven was that the board recommended that Fred Woehl replace Paul Durbin and add Rick Danvir to the advisory board formed financial working group.

That was accepted.

Recommendation eight was that the advisory board recommended Fred Woehl replace Julie Gleason on the advisory board form public comment working group.

That was accepted.

Recommendation number nine, the advisory board recommended that Tim Harvey and Dr. Cope, also known as cope, here replace Paul Durbin and Julie Gleason on the

advisory board form director change type efforts that support volunteer resources working group.

That was accepted.

Number ten, the advisory board recommended the title -- this is a good recommendation -- the title of the advisory board formed directors challenge type effort that support volunteer resources working group be shortened to the now-called support volunteer resources.

That was accepted.

Recommendation number 11, the board recommended that Dr. Sue McDonald and cope replace Dr. Bray and Jim Stevenson and that Tim Harvey be removed from the advisory board formed population growth suppression working group.

That was accepted.

Recommendation number 12, the board recommended that the advisory board formed national wild horse and burro advisory board standard operating procedures working group be disbanded.

That was accepted.

And the last one, recommendation number 13, the advisory board recommended that cope replace Jim Stevenson on the advisory board formed resources working group.

And that was accepted.

>> Thank you.

>> You bet.

>> Would you mind just giving me a brief overview of the remaining five.

>> I will be brief.

Recommendation number 14, Boyd, was that the board recommended that the BLM look at conducting a national AIS basically, but the programmatic AIS going and our response was that we are going to do that.

We are actually doing that in FY-15.

We are looking for a project manager right now.

So we agree that that's something that is needed and is going to help the program.

That's recommendation number 14.

Recommendation number 15 was that you asked if we could simplify the volunteerism opportunities on the web so people could more easily see how they could help us in various places in the field with the program, and we did accept that recommendation.

We are making changes to our website on it to make it more specific to our program and more use are-friendly, and if you wanted -- user friendly, and Sarah has taken on looking at writing description positions for the various things people can do in the field and getting those potentially posted so people can go, I'd like to do that job, then they can get hooked up with the field office that needs to job done, so we think we've made good progress on that.

Recommendation number 16 that you recommended we continue our financial

support for partnerships that aid adoption of trained animals.

We accepted that and I'll brief you a little bit later about the expansion we're trying to do with prison inmate training programs kind of nationally.

That is an action not just the way we accepted it but we're definitely moving out on it. Recommendation number 17 was that you recommended that the BLM explore options to increase continuity of board membership and our response since I was not at the meeting let me just read what our response was, we asked for clarification about this.

The question= was if the issue is around transitioning people who are going out of the board naturally, three people go off every year and three new people come in, if it was about that, we think that there are some things we could do that would ease that transition.

One of them is that we share information with the board more regularly so new members don't wait several months to -- they get a packet of information but they don't wait a while to get updates on what's going on.

And we are happy to do that.

We think that that's helpful and I think that some of you have found that helpful as well.

And if there's other things that you want to think about or clarify that you'd like us to look at to kind of ease that, we're open to it, but that's the one thing we have done but if there's other things that would be useful, we're open to hearing that.

That was our response to that one.

And the last one, recommendation 18, was that you recommend the budget be a stand standing item on the meeting and it is.

>> Thank you.

>> You bet.

>> That is the function of this board to recommend to the BLM.

That's why I imposed out to give a little more explanation is to the public on that.

>> If I may, I want to clarify something for the board and the response on the programmatic EIS, what's written here was written before the decision that Joan just outlined so you'll know it in the write.

Here it talks about how we are considering it, and I just want to make sure you're clear because what Joan said is true, we are initiating the programmatic EIS process and basically the response to the recommendation is yes.

>> Yes, thank you.

We send the response to the board within 30 days usually, and so it does say are considering so, thank you, Greg, we are doing it.

And I realize I forgot to introduce one more person, Boyd.

Paul McGuire is in the room in the back.

From the BLM of the Oklahoma office.

So thank you, Paul.

Sorry.

Go ahead.

>> Any questions from the board to Joan=?

>> Not so much a question.

I guess one clarification on recommendation 17 I think it was.

I think the intent of when we were talking about that continuity of board membership was we were really asking the BLM to really consider strongly, when people that have been on the board have been productive, reapply.

For instance, if you go back in the minutes from the recommendation, one of the committees that I'm on, we haven't been able to function because we're just constantly, there's been a change every other meeting we've got a change of a member, and, you know, there was one in there that we're asking Paul BRAY to replace Durbin.

>> We're the victim of the fact that with two meetings a year, then a three-year term for each member.

>> And when you've got a member -- and you've got three members and there's a constant turnover in the committees.

I guess we're throwing down on the table what can we do to try to make these subcommittees more productive because we only do get these two meetings a year. And one of the things that BLM has done, they've initiated that once-a-month call that at least the subcommittees can touch base with.

That's end about an really helpful.

But I think that's what the intention of that was at the time, wasn't it?

>> I'm sure it was, yes=.

>> It's just that it's sometimes hard to get a dynamic group in a dynamic that starts actually becoming product of and getting thing done as an advisory board, and then one-third or two-thirds of your membership gets out in one fell swoop.

That's really hard to come back up to speed.

I just wanted to clarify because I think it actually says in here that, it says if the issue, so it's obvious that it wasn't real clear because I think that's what our intention was when we brought that up.

I just wanted to clarify that.

>> In years past there were more meetings per year.

But --

>> That would actually be another way to do it, and if we had three meetings a year instead of two, I think that that would actually be -- it would give us the opportunity for these subcommittees to be a lot more productive.

>> Did you want to say something, Greg?

Go ahead.

>> Yeah.

So I have a little bit of experience with our resource advisory councils, which are also FACA groups, and we had subcommittees and those subcommittees actually met and worked on things that they were working on outside the main meeting of the resource advisory council.

So I'm wondering if another way to handle this is can't those subcommittees choose to meet as they choose when they choose, and more frequently to do the thing that we're working on.

>> That would actually be probably an even better way to do it.

Any time you have some concentrated work that you could do, that you could get really productive, you could put -- find a place that the three members can get together and do some work for a day or so may actually be a really good answer to that.

>> And those subcommittees, when they meet, that's outside this body.

You can meet independently.

It's not something that's directed by us because you're off working on stuff.

>> And we have in the past, you know, conducted conference calls with just the working group members, and that probably is the answer.

>> That's what I'm saying.

It's just what that I'm trying -- you know me.

I'm the old step out of the box kind of guy.

>> Boyd, cope.

>> Mr. Chairman, if I may.

I sit on two more other members, 24 member for the Forest Service for implementation of planning rule and EPA advisory committee where there are 26 members.

Obviously with budget constraints being as they are we don't face to face very often but we have the least monthly conference calls, and there are multiple subcommittees of both of those that also have generally at least monthly calls.

And since those are working groups and not true committee meetings, notification of the federal register is not required, no quorum is required.

Conference calls are pretty cheap.

They don't break the travel budget.

You can stay in contact pretty well and get a lot done.

It takes a good note-taker on the other end to keep track of the conversation to keep up with the ideas that are being brought up but it operates efficiently at very little, pens and keeps the members in contact with each other.

I would highly recommend we look into those.

>> One note for the public, anything that is decided in a working group is then brought to the full advisory board, you know, in the form of a recommendation from that working group, and then we would forward our recommendation from the --

>> Exactly -- in a public me go.

>> Whenever we discuss something as a working group, it's then reported here at this meeting, and there's actually no decisions made at these groups.

It's actually, we may come to a consensus in the group but then we put it to the full advisory board for a decision.

So it's very transparent.

>> I guess I could go with what Dr. Cope said.

The conference calls would probably be more financially efficient.

Logistical it might be a row.

Meeting face to face.

Tim lives in New Hampshire.

I live in Utah.

When we're on two committees I believe together, and so that makes it a little bit of a problem.

There are in regards to the maintaining, there is a BLM employee that is assigned to each subcommittee, and so, you know, they could be responsible for making those, take can those notes or whatever it is.

>> Okay.

I think we're probably at a point we can move on to the budget update and is Holle' still on the phone?

>> I believe she is, and we can certainly do that, Boyd, and I can do the program update after that.

>> I'm sorry.

>> That's okay.

But let's proceed.

>> Is this Holle'?

>> Yeah.

>> I am here.

>> Holle' is on, so welcome, Holle', and would you go ahead and start with your budget update.

>> If I can just interject for Holle', it's under tab 5 is the budget update.

Holle', that's the document that you sent in.

>> And I just want to briefly go over the spreadsheet that that is FY-14 and FY-15 on it and see if you guys have any questions.

I'm with the working group, wean working with Callie and I will answer any questions that you may have for the clarification so just let me know if something is -- you have a question, write it down and we can go over it.

Let's start with FY-15.

\$7.45 million and that also included any research that we wanted to look into.

[not audible]

Some of those operations included adoptions, short and long term holding and also gatherings and removals, which we did a minimum on our schedule of 3,000 animals. That also included the population growth, conducting population inconvenient toys are.

Managing the inventory of Allen's and their habitats.

And also the sections.

In the programs in yore head growth as you see there, that includes a series of things. It includes all of our support from our interagency agreements as well, and it also includes the NAS related research that has not been broken down as of yet.

So if there are any questions for me today.

>> Holle', on your budget line item JJ for gathers, that budget, does that include the fertility control gathers or the catch treat and release gathers or is that strictly for removal gathers, that budget?

>> That is school district strictly for removals.

The anything with the population growth question, or any applications that would happen, that would be under that population growth question.

And that is a program that was created in the year 2012.

And it was just for this purpose so that we could try and be able to separate and different is that it between removals and gathers in relation to the community of elk versus gather, removal and treatment of the general population.

>> Thank you.

Any questions from the board?

You have to have a question, right?

You have to have a question.

Okay.

>> Holle' Hooks: I'll move on FY-15 is at \$82 million and that includes about a \$2.5 million increase for continued implementation --

[not audible]

In FY-15 we have had several discussions, nothing is set in stone until we actually receive a budget but continuing remember reduce the number of removals and on the level.

[not audible]

Short-term facilities and long-term facilities.

We would also continue any though research and treatment that would be happening on the range.

And we're looking at spending somewhere in the neighborhood of \$79 million that is projected if not an exact number.

Any questions?

>> Holle', we're having just a little bit of a problem understanding you and you're speaking rather rapidly.

You're king out on all the detail.

>> I haven't understood hardly a single word she said, and the connection is really poor.

There's some problem.

If you will slow down just a little bit.

>> Oh, I apologize.

I was going over the on the range operations mostly for FY-15.

Is this better?

>> Much better.

>> Okay.

Sorry.

I didn't want to sound look some type of spirit overall in the room.

I apologize.

=.

But on the range operation is what I was mainly covering for herd management and monitoring and population inventory that would be taking place in FY-15 and all of those operations are within the \$80 million president's budget request that we put forward.

Also in addition, what is included in that \$80 million is the NAS continued implementation of research projects that we would have initiated in FY-15.

We also have some plans -- FY-15.

We also have plans to do field studies as well in FY-15.

And the other portions or other operations that that would include is holding both long and short term.

And long term holding also includes ecosanctuary.

>> Clarification.

There was a clarification, you just said the ecosanctuaries are a part of the long-term holding.

Is that what you said?

>> That's correct.

>> Okay.

Thank you.

>> Are there any other questions regarding FY-15 appropriations and operations?

It's included in NAS research.

One of the things that wasn't included in your documents were some of the projects we did in FY-15 and I'm sure someone will go over that so I won't go through the list unless you want me to.

Joan, I don't know if someone is probably going through what we did to initiate this fiscal year.

>> Joan Guilfoyle Holle', that will be going through the research we launched in FY-14

through FY-15.

>> Okay.

So any other questions for me related to FY-14 or FY-15?

>> John Falen has a question.

>> Okay.

>> John Falen: Excuse me.

In regard to population growth and the total cost of \$4 million, does that include gathers for treatment to keep these mares from having colts?

Is anything budgeted in that process?

>> Yes.

In both '14 and '15 we've identified plans, planned for funds and executed funds in the column for removal of M&L.

It's removal in emergency situations.

What we have asked the field to do is to also treat the mares.

And for any gathers that are specific to treating of animals or fix ratio adjustments, all of those would be under the KO growth suppression.

So the idea was to be able to separate the two and be able to identify funding that was supported for animals AML and funding to treat animals or some type of population growth suppression activities.

>> It seems to me like that that might not be quite enough money.

If we're going to get serious about population control, we need to gather some data in order to accomplish that, and I'm just questioning if that is enough.

Thank you.

>> It's a great question, and it's one that I think we've been challenged with a little bit this last fiscal year, especially in '14 and '15, not really having the schedule available, understanding how many animals we would be able to remove due to space limitations and funding limitations, not having to budget immediately in October.

It does kind of pose some challenges with when the facility fertility control agents can be applied and I'm sure that we will see that during the research but it does.

[not audible]

Plans that we have.

We don't have the funding at the beginning of the fiscal year.

>> If I may try to help clarify that a little bit, John, by asking how originally in FY-14 we had planned to bring over \$16 million for NAS, recommendation many related to the population growth recommends and sometimes you get these in the FY and sometimes you don't because of administrative processes.

Holle', do you know the amount that we believe we will end up obligating in FY-14 which means it's going to be slim even if the work doesn't begin until FY-15?

Do you have an updated number from the original plan of \$6.1 million?

>> I do.

And that original plan started at 6.9 and then went to 6.1 million and after it is all said and done in 2014 we would have initiated \$4.1 million.

So even the funding that we obligated, that \$4.1 million doesn't mean that all of those product will be completed.

It was just initiated, and so it wouldn't be available to be applied immediately.

I think that's another challenge.

And so that \$2 million difference is definitely from where we started planning back in September, October of the year 2013 to when we actually did funding for the FY-14 operation which didn't come in until January.

>> Thank you for your explanation.

>> In the research section, too, when that goes over all the regions we have you launched.

we have made a very serious commitment to population control.

We have renewed them and we're pleased of the progress we have been able to made in 2014, and the fruit of that I think is above and beyond.

>> John, just a little bit more.

What I expect you will see going into the future, right now a lot of the budget is around the research element, and so it's greater in '15 than it was in '14.

'15, you're going to see a lot of research activity, and I would expect that you would see going in years out then when we get -- once we have a pretty good idea of what we can apply where, you will see greater amounts of money devoted towards what I would say operational.

Now we know what we want to do, where we want to do it.

Now we've got to apply money and go out there and actually get things going.

So I expect going out in the future you'll see more and more money devoted to those particular line items.

>> Thank you for the additional information, and I'm just happy to see that you're thinking about this progress because this is where we absolutely need to go.

>> I agree.

One more thing about it, what we tried to do in FY-14 was obligate as much of the money for the full life research projects we did know, so wouldn't didn't just put aside the money for one year.

If we knew it was going to take three years or four years to get that piece done, so we're trying to make the money commitment so every year we don't have to continue to find money to continue the research but we've got it obligated to make the research go to its end, which I think is a good thing.

>> Although I understand the time issue that you're talking about, but to me that's the most concerning part of this thing, the time it takes to get some of this going.

I understand it, but it's difficult for some of us to accept.

>> Right.

>> I've got a quick question here.

On the population growth suppression, it looks like you spent \$189,000 and change this year.

Is that correct?

So far?

>> Holle', I'll let you go back to the budget sheet.

>> Yes.

And keep in mind that though we already do have some of the on hand, it's not the agent that's needed or that's showing.

That's showing the cost for the applicators to go out and administer.

>> The activity for applying it mostly takes place in the fall, correct?

>> Yes.

>> All right.

So the budget item is \$2.3 million.

My question, I guess, and I'm not sure -- I think Boyd referred to this earlier but it might be just because I'm having a hard time understanding you sometimes.

Is there a plan to gather activity specifically to apply PZP even if horses aren't being removed to try to keep some of these issues at hand?

>> For FY-14, no, and I was going to do some of that in my program update but I'll brief you a little bit now.

All of the removals -- I better pull out my notes to make sure I've got it right -- all of the removals that we have done so far this year with the exception of Wyoming on one of the court-ordered HMAs, a checkerboard area, have been done either because of private property requests to have to have them removed from private property or because they were creating a public or human safety nuisance, animal on the highway, for example, animals in backyards where they were interfering with people and they didn't want them in their backyards, that kind of thing, a public safety issues.

Those are the only kind of public removals we have done in FY-14.

>> I'm not talking about removals.

I'm specifically asking about gathering just for the application.

>> Right.

>> Gather, apply and release, is there any kind of that activity scheduled?

>> The PZP moneys have been spent in HMAs where PZPs have been applied for darting and through helicopters.

So those are the only population suppression methods we've been doing in FY-14 with PZP.

We have asked the field to look at all of they are HMAs and said where else do you think PZP by the methods of delivery that we currently have, you can start using it and we have the aniki I believe believe in Utah is starting to use PZP suppression.

>> Do we have a time spot we're going to be talking about this again?

>> Yeah.

>> And I'll save the rest of my questions then for later.

>> Right now let's have the rest of our questions for Holle'.

Go ahead.

>> We're five weeks away from the start of the fiscal year and we don't have the budget passed.

The president's request has a \$23 million increase.

Assuming Congress pulls its usual stunt and fails to pass a budget and goes on with a continuing resolution, where do you get the \$23 million that ain't there anymore?

>> The \$23 million cut in our program?

>> What you've got so far expenditures is \$56 million with a request for \$79 million.

If a continuing resolution comes through and you don't get the president's budget request and therefore don't get the funding increase, where do you make up the lack of funds?

>> Right.

We definitely have to make some adjustment and that would be a question on whether or not what are the bureau's priorities and what the program priorities would be.

That is a question that I decision that I would make by myself.

We would definitely have to review what the plan was, and what we've already obligated what needs to be continued.

It would definitely be adjusting program policies.

I didn't say for sure exactly right now what would be cut out of the program.

Of course, our primary focus would have to be to hold the animals, to continue holding the animals that are already placed in open range facilities, and then as things would --

[not audible]

>> Holle', this is Greg.

I've got an answer for cope.

So, Holle', what was our fiscal year '14 budget total?

>> \$79 million.

>> So I just wanted to clarify that.

What she's showing here on this table is what has been spent.

>> So CR would remain.

>> Correct.

The difference is smaller than what you were thinking just looking at these tables.

And E. as to what we would cut, probably the coffee bar and maybe the car that Holle' drives.

>> CR maintains at \$79 million, your program is intact.

>> This is our coffee.

>> Does everybody understand I was kidding?

Just kidding.

[Laughter]

We're not cutting the coffee bar, right.

>> Callie has a comment or question.

>> One of the things I would ask for in the future, I don't think our public has been able to see our budget on the screen.

The if we please be sure we have that up on the screen as well as the pie charts are pretty good visuals of where the money is being spent, so if we could do that in the future, I would appreciate it.

>> No problem.

>> I had the same thought, Callie, and I think that's a good idea, too.

It's hard if people download and it print it they have it in their hand but not everybody does that.

So I agree.

>> If there are no other questions, thank you, Holle' war for participating today.

>> Thank you.

>> With that we'll move on to Joan's update.

>> I will try to have us not lose time now that we lost some.

So turn to tab 11 which is where I want to go through kind of a lot of the off-range activities first and then get into some of the on range things that we started to get into a moment ago, and I will just say, too, I think I sent to the board a, the new organization chart that we have in our program which I'm very delighted it's been about two and a half years to get that completed, and mate means is that we have reorganized to a degree where we have the folks in the Reno office are going to be the on-range branch which will be in charge of removals, gathers, treatments, population research, research generally, and the people in Oklahoma, the other branch will be the off-range branch which will be adoptions and sales and inmate training programs and pastures and corrals and that sort of thing.

Having said that we have not filled the two branch positions which will be my supervisors and we have a lot of vacancies and people coming in and going out.

We don't have anyone who is the national adoption read routine.

So I'm going explain the documents that the acting has given and just with that awareness that I think next April, which is our next board meeting, hopefully the two branch chiefs will be in place and they will be able to report full oh their particular areas.

But you can see under this adoption update that to date we have adopted 1,710 animals and we have sold 76.

58 of those are burros.

And I don't know if all of those burros are through the Humane Society's Portaro project but that's a wonderful project that we started with them.

We have a donor that are interested in getting trained burros or even untrained burros

into homes and that's been a good program for us, getting sale eligible burros out of corrals and pastures and into homes.

So that's the adoption and sales update.

And before the next page is just the schedule of adoptions that are coming up from August 8th all the way to December 11th, and this is all posted on the web, of course.

One thing I want to say about the adoption program is Tim, a couple years ago, maybe a year and a half ago, give us a recommendation I think -- I don't remember if it was from the board or just from you, Tim, but it was the milk run idea, which was some concepts on how to increase adoption and infrastructure and enabling good animals coming east so we can better tap into that market.

I've taken that report plus an internal evaluation that I had done by some BLM management folks about our adoption and sales program because we really hadn't done an evaluation and said what else can we improve, somebody external to the program look at this.

And I have both of those reports which I have given to a special team in Nevada that has formed around cooperations and adoption and sales and asked them to help me look at a in other states.

All the states, including Wyoming, everyone, how we want to implement some of these recommendations.

What are the barriers, ways we can get around the barriers so we can do all we can do to maximize four adoptions and sales.

At the same time Sarah will talk with you about the research that something the national science has done a study.

What is the demand for these.

I'll let Sarah go into that in detail.

These are underway and I have asked the Nevada team to recommend back to me both the milk run and on the internal evaluation that we had done.

As I mentioned the next flyer is the inmate training initiative, which we -- I think, if my memory is there, four or five states that have kind of, mostly in the east, although I think one of them is in Idaho, whose prison industry programs have raised their command said we'd look to take the model that you have had underway for 25 years in some of these prison inmate programs and get it launched in our state and, of course, in the eastern states for the BLM, there are BLM folks all over, so we have to figure out where we can lift them up, I believe Wisconsin is one of the states and perhaps Kentucky, if I'm remembering correctly.

Ohio.

Greg remembers Ohio.

So how do we do that, and that would be something we'd work on with the eastern states organization, the state director and his staff.

We think eats a wonderful program -- it's a wonderful program.

It's trained animals going into homes.

Whether they're adoption eligible or sale eligible.

If they're trained and we have good homes for them, that feels like a very good outlet for us and ways for the animals to get into homes.

We have also had conversations with the federal bureau of prisons about doing this with the federal bureau of prisons so it's federal to federal and that's also exciting because they have in addition to obviously prisons that they run and inmate training that they do, so those folks can come back into society with some more skills, they also have potentially some pasture land around their prisons that the animals could live on as a holding as they go into the training, as they get trained up, as they get adopted or sold.

So those are some nice initiatives that we're excited about and looking forward to off-range.

I was going to ask Zach if he has anything he would like to share about the Mustang heritage foundation.

Zach is the program officer for that.

Is there anything you'd like to share?

No, nothing new.

Okay.

Great.

So continuing on with whatever else we have in here in terms of off-range, you'll find a fact sheet which I know was posted on web as well kind of about off-range management.

The costs of off-range pastures, off-range corrals, and I will say as eventually I want to get into kind of the on-range situation, there's definitely a connection here, a very strong connection between what you can do on-range with what you are doing or having to do in our options to do things off-range.

So a lot of you know those facts already but I do want to get into that a little bit.

You also have in here a facilities report which basically tells you what our capacities are now with contracts or agreements we have right now for either pastures or ecosanctuaries or inmate training programs.

Those are the three kind of categories and corrals.

I'm sorry.

Four I guess.

We call them three in here.

You know that the amount of funding that we spend in off-range holding last year was 64% of our budget and we've been seeking ways to reduce that as much as we can and pastures are obviously much more economical than corrals, and we like the environment better, obviously, than feeding off of grass than having to have hay hauled in, et cetera.

So we're doing a lot of things in that.

And I'm going to give you kind of an update, although I need some details from either Zach or Scott Fluer, who is a Wyoming person who has been on detail with us who actually has been in charge of the solicitations, so I'll say what I know and if I need to be corrected, I'll ask Scott to do that.

In terms of having capacity for off-range, we did launching a solicitation for corrals nationwide.

So corral space war where else would we have places where if we need to put animals into.

That solicitation has closed.

We have not awarded any of those yet because at the same time we are doing the solicitation for pasture space nationwide.

And that solicitation hasn't closed yet, so we're waiting until that closes until we decide where are the best places to invest in contracts or agreements so we can have animals be held in the best conditions possible at the best price.

Obviously pastures are again cheaper.

So that's -- I expect that our decisions on that will take place in the next month or so, I would say, when the pasture contract, solicitation ends, and we decide where do we think is the best geography, the best location, the best price, the best sites.

So I don't know that there's much more to tell you about than that except that we're working on this.

Last time we talked, I think I told you that at that point we had more than -- almost 50,000 animals in off-range holding, which is about what we have in on-range living free roaming, and that the cost of that was something we were very concerned about. So this is an effort to see what other places, the training program is there, too, the holding there.

Where else can we move niece these animals into so we can reduce tow cost and free up money for more research.

We're investing a lot of in research but we want to have the money go into the field to do monitoring and range management, et cetera.

That's a big effort of ours.

Why don't I stop there and see if there are any questions before I go on.

>> What's the minimum size for long-term as far the amount of animals?

>> I believe the new solicitation is 200.

>> That's been lowered, correct?

>> Yes, it has.

It was 500 before.

>> You're down to 200.

Is there any consideration for facilities that would hold fewer than 200?

>> I'm going to ask the folks who have been dealing with this specifically, either Scott or

Zach, to weigh in on the advantages or disadvantages or challenges with that.

I know compliance of monitoring --

>> The costs that go up with that.

>> Right.

>> I know that you may have a few other resources, a lot more other resources available if you could maybe go down even as low as 100 or 50, and I know that now you've got a whole bunch of strings to hold onto, but there may be some avenues available, a lot more available, especially when you get east of the Mississippi, that there may be some people out there, because land is much richer there, but there's also a lot smaller plots, and you may be able to find some folks out east that would be willing to take smaller groups of horses.

That's what my question was, directed to that.

>> Let me get Scott to give the conditions that were there when we listed these solicitations.

I think it's an interesting idea to expand further.

>> Yes.

The long-term -- let me just give you an update.

We went out for short-term holding facilities back in May and June, and that solicitation closed the middle of June and there's a team right now looking at that.

That solicitation for the western states, basically west of the Mississippi.

Current we're open for long term pasture solicitations in eastern states and the western states until September 8th.

Joan, I stand corrected.

100 head is a minimum.

It's 200 head on the short term.

>> Great.

>> But on the long term it's 100 head to 5,000 head.

So for both western states and eastern states.

And then we're also open for short-term holding facilities in the east until I believe September 8th as well.

>> So the short-term holding in the east would still be the 200 horses?

>> I believe so, yes.

>> I'm really happy to hear the lower numbers because I think it just opens up to a lot more possibilities.

>> Well, and there's been interest from folks, again like what you're saying, Tim, smaller numbers and more opportunity to possibly pasture the horses and other opportunities.

>> In the future would there be -- could somebody be given consideration maybe as low as 50 horses if it was out east where smaller plots out there?

Is that something that could be --

>> I think that may have opportunity.

I think it would have to be something discussed, you know.

>> But BLM would be open to that do you think?

>> I think --

>> That's what I'm asking.

>> The contracting specialists would have to talk to us about that.

And then also the compliance and inspection and oversight piece is really important.

>> I guess my question is I'm just asking if they would be open -- if somebody approached them and said is this something you would consider, would you engage in a conversation.

>> I think it's something to consider in certain areas of country, and like Joan alluded to there's logistics and science and things that would have to be associated with a smaller number.

>> Zach, is there anything you wanted to add to that?

Because you've been heavily looking and supervising this process.

>> No, I guess the biggest point would be that we're looking at, it's kind of a test, a pilot project and this is something that we haven't looked at before in the east, and so we're going to try and go into it if we award long-term pastures in the east, very cautiously, understanding that it's a very different climate environment, that there are some issues that could come up with some of the maintenance and care of the horses' hooves because you don't have the substrate that you do normally in some of the other places that we have long-term holding pastures right now.

There's also potential at the exposure to different diseases and things look that that may occur, different vaccinations that need to occur in different parts of the country. So we're looking at it, and so I think we'll have a better idea of how we can expand and maybe into the east after we get back and start looking at what we received from the solicitations.

>> I'm just thrilled that you guys are even looking at it.

I really am.

Out east you have one of the considerations on pastured horses is founder.

I don't think you have to deal with it because of the richness of the pastures and stuff.

I'm glad to hear that you're looking at all that stuff.

So thanks.

>> Joan, before you leaving have leave the holding facilities question I want to bring up one point that is something that hasn't been discussed a lot, and I think because of the contract closure in Kansas and the transfer of horses and some of the mortality that accompanied that transfer, I think it's something that we haven't thought about is some of these facilities have horses that have been holding for a long time, and we're getting some very high-aged horses in some of those facilities.

Now, we all understand fully there's an attrition rate and we've been accustomed to an

attrition rate that's very low in those holding facilities.

But I think looking at the number here, we have almost 22,000 that are over 11 and in that particular Kansas situation that we have a very high teens average age, and at that we're going to have to -- I don't know if we change anything, but we have to accept the perception that there's going to be a higher mortality and a higher attrition at some point in some of these holding facilities.

And like I say, I'm not sure there's anything that needs to be done functionally differently, but I think the public needs to be made aware if that is the situation, that's a reality and goes we have to accept that reality.

The bureau has to accept that reality.

So it's -- because the first thing I think people think is that something was done wrong when you have a higher mortality.

And so these contractors are sitting back saying, I've got a whole bunch of old horses, maybe I should shut down the contract because I don't want to be the goat that has all these dead horses.

I'm throwing it out there as something that needs to be thought about in the future with some of these long-term facilities that have been holding horses a while.

>> Thank you, Boyd.

That's a good segue into what I was going to talk about next, was the recent transfer that we had to make of 1493 mares from a pasture in Kansas that the contractor decide they did not want to stay in business with us anymore and they gave us notice that we needed to come and move them, and I know you know some of the details of this but let me go over it a little bit and see if there's any questions.

I was very proud of the team who had to find the new space for them, that they worked very hard to try to find space as close as possible to where these animals had been housed for many years.

It was one of the oldest pastures we had.

And they ended up finding a place that was only 310 miles away, which was way better than having to ship them out to Utah or Wyoming or something.

We wanted to minimize the stress on these animals.

So they found a place that was close, and we moved the animals.

It was the first time we had done that kind of operating with those kind of numbers in those age animals and we were concerned about it.

And I think you know of the 1493 that were moved, to date 80 of them have either died on their own or been euthanized.

We did send's team down there to kind of investigate it and we're waiting for their report in the sense of tell us what the feed is, tell us what you can discern about this.

Is this -- is there anything that we could have done differently or should have done differently on that kind of operation.

From a communications standpoint, I think I can say that we do recognize that we

could do -- we needed to do more about external communications about it because there's nothing to hide about it.

We had no choice.

We had to move these animals.

And just as we do when gathers have our animal welfare concerns in place because we want them to be -- to ease the transport as much as possible, we do a lot of communications I think on the gathers and on these things which may come up or not, we don't know if more pasture folks are going to want to go into some other line of work and use their land for something else, but I think we will increase the visibility of it even if it's posting on Facebook when they're moving and they have moved and arrived to a new place.

Those are some of the things that we're thinking about.

The report has yet to come out from the team that was on-site, and I guess I'll say we are interested in looking at that operation and seeing what we can learn from it, and if you have any questions about it, we'd be happy to answer them.

>> The first question is how many necropsies are being conducted and how many have been done so far?

Do we have any preliminary results on the necropsies that have been done?

Do we have any reports at all?

>> I don't know the answer to that myself.

I think that's going to be in the report from the team.

But I guess I could ask if Dr. Kane, if you know anything at this point more specifically about that.

>> The number of necropsies were done a couple of weeks ago.

They indicated that the deaths were primarily attributed to the condition of the animals --

>> You need to get closer to the microphone for the Internet.

>> No indication of infectious or contagious problems from them.

>> And that seems look a very short answer -- like a very short answer because until you see the entire results coming back from histology and a number of other things you don't want to venture out there and place any kind of a potential diagnosis until you have a little more footing in view of what's going on.

Callie.

>> Callie Hendrickson: So I guess given -- I can envision, maybe I'm totally off, you but I can envision that we're going to be seeing more of these long-term holdings, saying I'm not interested in keeping horses any longer.

So rather than getting more long-term holding options, we may see that number shrinking.

So in the future when that happens or I guess whether it's from long-term to short-term or vice versa or whatever, what is the criteria for the body score on horses

before they're loaded on a truck to go anywhere, whether they're coming off the range or anything?

Is there a specific criteria that we're saying if they're in X condition, they should not go on the truck?

>> I don't know that we've established a body score.

I might ask some folks who are involved in operation to answer that.

I would say that some of the animals were determined not to be transportable and were moved to a different location because the veterinarian on site did not feel that they would have a good chance of serving.

It looks like I've got Zachary is going to offer to answer some of that.

>> Yeah.

Generally we use a body condition of three or lower as a score.

However, that's not the only determining factor that we use.

We also use -- well, it's the prognosis for recovery or survival, and if something has an indication that it has a poor prognosis, if it has a good prognosis or potentially the animal could recover, then even if it was below a three, we would still ship that animal based on its prognosis.

So using just the body score alone isn't -- we take that into consideration, but it's not the sole determining factor.

>> I've got a quick question, too, on the --

>> Tim, just a moment.

>> Did I cut somebody off?

I'm sorry.

>> To supplement that response and kind of play off of the point that Boyd made, you know, we look at their body condition when they're getting ready to load.

What we haven't done is actually open their mouth and see what the condition of the teeth is, and a question that's been asked as a result of what occurred recently is, geez, do we even need to do that because the toyed condition doesn't consider that.

So there are things we're looking at in terms of what, if anything, do we need to do differently that's more than just the body condition.

>> Thank you.

And I understand.

I mean, the body condition is going to be a pretty good indication but I think there are some additional things that need to be done.

I guess another kick question.

Typically when those horses are coming, like when you're getting ready, whether it's the short-term, long-term, vice versa, are they, I guess for a lack of a better term, preconditioned.

Do they get their -- I guess if they're coming from short-term to long-term, they've already done their worming and that sort of stuff, but if vice versa, they haven't been

through that, is there going to be a process where they're going to go through that a certain period of time before they're loaded on the trucks and go?

Because speaking of livestock in general, we need to prepare them ahead of time rather than waiting for them to get there.

>> These animals did receive all of the appropriate vaccinations, deworming and blood draws, blood draws that were required for the shipping of the animals in compliance with the shipping requirements or the regulations for the state, so they did go through that process.

There was a condensed period, I think, and so that kind of happened quickly but it all -- we did do that.

But again I think that some of that will be reviewed as far as, and we're still waiting for the report to come back from the overall review of the operation.

>> Tim, did you have a comment?

>> Yeah, I did.

What was the -- I guess one of the things that seems to have stress is obviously a factor here for these guys, but also that you guys didn't have an awful lot of time to prepare for this move, right?

Wasn't it sprung out as a bit of a surprise?

Can I make a suggestion that all future contracts, I would put a notification if they're going to terminate their contract, there should be a really good notifying timeline that will louse the BLM to prepare period to be able to take on a task like this, whether it be -- I don't know -- I know that from the information I gathered, this really, you guys got back slapped with this as far as timeline.

You just didn't have a lot of time to prepare to move these horses.

And it's a six-month timeline or a one of had-year time line in a contract they want to, so BLM can make this process go a lot better.

>> Was this a termination or just a lack of renewal?

>> This was a termination by one of the contractors.

>> It wasn't at the time of renewal of the contract.

>> I don't know that.

>> What ended up occurring was that there was an extension on an existing contract in order to help us with some of the issues that we've been actually seeing with continuing resolutions and things like that where we're not actually getting the, you know, the appropriated funds at the time that we need to in order to put them on a contract.

So these particular contracts were ending at the later part of September, which with the procurement deadlines and things look like that it just wasn't reasonable to continue to have them end on that particular day.

There was an extension that was done.

It was a unilateral extension.

It was done by the government.

They have that option.

And then it was up to the contractor whether or not they wanted to -- we started negotiating with them -- if they wanted to extend possibly farther than that.

This particular contractor, it's an LLC so there were a number of people that had to come together to make a decision.

It took them a while to get us the decision from the LLC.

Once we got that, we were able to move forward with trying to procure a different location for the animals and look for space.

Some of the geldings that were on the area, we were able to move to long-term pastures that were relatively close.

The mares we ended up having to ship to an off-site facility.

Some of it had to do with the length of time in the bureaucratic and administrative process within the agency itself and how long it takes to procure additional space through a contract.

Sometimes the solicitations need to be very lengthy.

They go through a different international process through solicitor's reviews and then they have to be reviewed by a number of different contracting officers and people of that nature.

So some of it, given the administrator procurement timelines, ended up butting up and making it very tough for us to do it and make that decision in a timely manner.

>> I just want to make sure that we're not really besmirching the reputation of people, the contractors themselves.

>> Correct.

>> They were throwing them out on their ear type of thing.

>> I'm not trying to besmirch anybody.

I'm just asking is there something that -- I would like to see maybe there's some consideration given to setting up some type of guideline in the contracts for -- to make sure that if somebody wants to terminate that there's enough time to go through the process as described in a time timely manner so if you have to move horses you can do so in a better way.

That's all.

>> And I think that it's a -- it's something that we should look at and can look at.

>> I understand if you put up something that's too restrictive it's going to make people tentative about signing a contract, so you have to find that happy medium in there, but you're dealing with live animals.

You're not supplying nuts and bolts.

So I think there needs to be a different set of guideline and it's one of the reasons we decide to go out to the nationwide solicitation of all kinds.

It's a balance between tying up money and space that you may not need but having the

space that you may need.

That's the balance here.

>> No, I understand.

>> You know, I understand that ya'll were in a tough situation.

You had a short period of time that you had to move these horses and all that.

I think there need to be some contingency plans for stuff like this in the future.

I think ya'll done a good job of trying to get that work out.

But as a horse person myself, any time you move an older horse from a pasture situation that's been around it for a long time straight into a short-term hay-fed thing, that's going to create problems.

And I think we have found that out.

But I want to go on record stating that ya'll was dealt a tough hand and I think ya'll did a good job of playing the hand that you was dealt.

>> I'd like, board, if it's all right to just ask Dr. Kane is there anything we know at this point about the stress-related factor more specifically or do we have to just wait until the report comes out to know how much it was or wasn't present or is it too soon?

Or do we just not have that yet?

>> I think it's clear that stress was one of the factors.

I think it's a combination of a multi-factorial thing all related to the transition from the pasture setting to the feed yard setting and adaptation to the feed yard setup.

There were certainly elements attributable to the fact that some of these horses were older and the nutritional changes from one setting to the other.

>> Anything else on that one?

Boyd?

>> I think we've covered that.

>> Okay.

Thank you.

A couple more things related to off-ring space.

Palomino valley corrals in Reno, a year ago this month actually we held a public workshop, which some of you may remember, that was about the issue and the questions around shade and what was required, what kind of shade would be required for these animals to have as much comfort as possible in those high temperatures that can happen down there.

U.C. Davis came in and did an evaluation of looking at the facility for us and they did recommend that weeing stall shade over the pens that hold compromised animals.

And at Palomino valley, another short teller contract, have been installed, so we took their recommendations and have followed through on that.

We have also, Dr. Kane, offered that APHIS could come and do a formal assessment which is an expertise area that APHIS and they did go to Palomino valley and done that assessment.

I'm sorry to pull you up again, but anything preliminary on that assessment?
Trying to look at these issues, you know, in terms of climate training, too, over the future, weather extremes.

What can we do to ensure comfort as much as possible for animals in various kinds of conditions.

>> I think we'll see that -- a first draft of that later this month or actually in September, I should say.

The visit did go as planned in July and we spent a few days there taking measurements during the high solar peak of the day as well as at night in the dark, and, you know, the visit went as planned.

They're crunching the numbers now and we'll probably have that for you at the next meeting, I suspect.

>> Thank you.

>> Thanks.

Just two more things I think off-range, and then I'll go into the on-range connection here.

Some of you remember the prize challenge that we have been working on with the office of science and technology policy that the White House, it's part of the White House administration.

We did have a workshop with folks -- I'm forgetting now -- maybe four months ago. Dr. McDonald and June Sewing were part of those workshop participants.

We had a very good reputation of a lot of viewpoints out there.

We did not select the participants.

The contractor did for us.

And that day long workshop, what we asked them to do is come up with what are the best challenge questions that you think should be asked of anyone in the world to answer to help our program.

What's the problem we should try to get solvers from anywhere to look at and help us get some success on or some resolution or new ideas.

And I just want to share with you the four things they have discussed.

We have not settled on one prize challenge for sure.

Actually three of them I guess that they discussed.

One of them was the, and kind of an ideation challenge about what is the demand for these animals in the adoption market or the sales market.

You know, do people want them in their homes.

And that was kind of similar to what the national academy of science had already told us to do that we're launching money on, so I'm not sure that'll be the one that we'll go forward with because we're already looking at it in another way.

Another one was entirely new contraceptive, longer lasting, perhaps more easily administered to animals in western range lands that are not that approachable, you

know, sometimes they're hard to identify one from the other, et cetera, so a totally new contraceptive was another idea they discussed.

And the third one was is there any other way to deliver into our animals the current PZP formulations we have.

So it's an expansion of how else could we get them into the animals on a timely basis, often enough so that it would be effective because we know PZP is very effective if you can get them into them every year.

Those are the ideas from workshop and I'll keep you updated about the process as to which of these we think should be launched and these are the prize challenge, would not be funded with government funds.

I think you all know that.

It would be working with a partner in the private sector, so we have some work to do in that area, too.

It was a great workshop.

The White House folks came and said it was one of the best they had ever seen.

The group that we pulled together for that, they all said -- there may be 15 or 18 people there; I cannot remember how many participants -- but at the end they said we would like to stay and help you with these.

And these are some people who had been around the program in many ways already, and some were brand new that this company found, and we said we will find a way.

I don't know what that will be yet.

But thank you.

They were interested and engaged and just wanted to help us.

So that was a great process.

The last thing I'll say about -- oh, one more thing.

Falen, is one of our corral facilities in Nevada and we have agreed to have public tours there occasionally and we have one set up tentatively for October 18th.

Just wanted to let you know that.

That is in Carson City, Nevada.

So just on the calendar potentially that that will be the date that we'll invite people to come in and tour the facility with some of our folks.

I wanted to make just the connection to the off-range holding conversation we just had with the on-range situation and say again that in FY-14, fiscal year '14, we -- the only removals that we ended up approving were the ones as mentioned, the checkerboard area in Wyoming, which was a court-ordered removal, and then a variety of private property requests or public and safety and nuisance animal requests.

For FY-15 which, of course, we're already planning with the field, we have asked them to not only give us those kind of categories of removal -- category of removal requests but to look at where else should we continue PZP treatments, wherever places that need a retreatment, where are places you think your HMA would be

suitable for a research project because we do hope we will be able to do some pen trials too do field trials.

On the various population growth suppression tools.

Zach is going to update you on where we are with that RFA, getting a lot of different ideas in, where we are with evaluating them, but about when we get those evaluated and we do fund those to be in the field, we need the locations for them to be in the field.

So those are the other kinds of categories that we have asked the field to submit proposes to us.

We have programmed 2,000 removals in terms of our budget for FY-15.

We may have to adjust that one way or the other, you know, based on funding, based on need, based on space, and based on kind of the research.

We're very committed to getting research in the field as soon as possible.

So that is kind of the nexus between those two.

There are any questions I can answer for you at this point?

We don't have any temporary removals or gather scheduled at this point.

It's preliminary.

We don't even have the info in from the field at this point.

Tim, did you have anything or misread you -- no.

Anybody have any questions on that?

Then I have just one more thing if you don't.

Okay.

I wanted to let you know that I did follow up with the office of inspector general about a week and a half ago and I asked them if they had any updated information on the investigation into the individual named tom Davis that bought thank you 1777 animals from us over the course of five years.

I think the investigation was taken over by the OIG.

I think it began in 2010.

I didn't get an actual date on when it was turned over on the OIG but I'm sure it's been at least a year and a half, at least that.

And unfortunately what the inspector was able to tell me only was that it's ongoing. That is the only thing she said that I could share with you, and so I just wanted you to know, though, that I'm contacting them regularly and saying do you have any more information for us.

We're interested in knowing if results of this, so I just wanted to share that with you.

>> Thanks for that update because that's something that -- you know me -- I like following up on those things, and I appreciate the fact that there's a lot of people in the public that may not really think that the BLM is pursuing that but it's out of the direct BLM hands because it's in the OIG's office, and I'd do really appreciate it because Joan has been giving me pretty regular updates on it, and basically until you hear back from

them there's not much you can tell people.

I do appreciate the fact from a humane advocacy standpoint that the BLM isn't going to let that go away without an answer.

So appreciate it.

Thanks.

>> You're welcome.

>> Next, please.

An update.

>> Unless you have a question.

>> Just one moment.

We've got one question.

>> Just kind of an observation, I guess, Joan, and I understand the constraints that you're under with all of this.

For the last year anyway our focus is on once the horse is removed off of the range, then that's where all of our focus, all of our money is going, and I know at the last meeting you had done a nice job of putting together a presentation about the cost of what it costs when you put a horse in holding.

I would ask that we really get started focusing on what the cost is when we leave horses on range.

We still don't hear anything about that, and I know that that's part of the presentation that we'll have today, is just general range health, and I know it's not easy to quantify, but we've got to start looking upstream from where those horses come in and get that problem solved out there.

>> Yes.

And I'm glad you brought that up, Callie, because one reason I asked Dean to be on the phone was he's the one who has been working most closely in the national EIS description of what has going to do for us, and if, Dean, if you're still on the phone, could you respond to Callie and talk about how that will be covered or addressed in the national EIS.

Are you still there, Dean?

>> Yes, I am.

I'd be glad to.

Can the board members hear me?

>> Yes.

>> So, Callie, last meeting you asked about this very same thing, and it involved not only the impacts to the range of increasingly expanding herds but also the economic aspects of doing such.

So a national programmatic environmental impact statement would include the evaluation of several alternatives, and one of them would be no action.

So that environmental impact statement will address the very things that you just

commented on.

>> I'm glad to hear that, Dean, and thank you, Dean.

Glad to hear from you.

Sorry you're not here.

So I guess what kind of a timeline are we looking at?

>> An environmental impact statement is going to take two and a half to three years to complete.

Two at the very shortest, three at the longest.

>> Okay.

And in the meantime, and I guess just know, I know you do, but know and understand the frustration that's out there of what's going on on the range between now and then.

Thank you.

>> Yeah.

I think we do know that, although I've heard it said many times because we are aware of what's happening to the land as we have these twice ALM numbers out there, and we are -- I guess what gives me a little bit of hope is that the research that I think will tell us how we can control the numbers, the population growth of these wonderful animals, but there's no control to them except people, there's no natural control of them.

We don't hunt them.

We don't remove them like we do cows for use as food or anything.

I Feeley we have a little bit of hope that the research puts the tools on the hands of the managers on the ground that can tell them how they can control the population growth level in their HMA so it is sustainable for the wildlife, the horses, the grazers and the land because if you don't have land, you don't really have anything.

And so I think it's going to be very hard for a while until we get some of those tools, and I'm very much in favor of getting them in place as soon as we know that they have scientific viability, and I think people understanding on many fronts that removing alone, as the NAS told us is not in and of itself going to address the problem in anything other than a short-term basis.

You need that population growth suppression tool to go with the AMA.

I think we under and are doing our best to get the tools in hands of people as quickly as possible so that the land can look like it looked yesterday.

In good shape yesterday.

>> Dr. Cope has a question.

>> On EIS, of course, need to require examination of evaluation of, so socioeconomic factor, and my experience said the local government officials has been frequently those effects are pretty briefly described.

Now, on a programmatic EIS how much opportunity for involvement is there for local and tribal governments as cooperating agencies in the development?

Hello.

>> It takes a minute.

>> Dean, I think this might be directed at you.

>> Yeah, I was thinking about the answer.

[Laughter]

>> And we could have a new cadre of economists in our planning staff division.

I don't know the answer about what opportunities there would be for local government to participate in that.

Certainly as far as public comments, yes, as far as them assisting with the analysis.

I don't know the answer to that.

Greg Shoop, can you comment further?

>> I was quiet, too, again Dean, because I was trying to think of what the answer was.

Cope, I don't think we have a specific answer for you, but I know in our experience on programmatic EISs there that are many, many cooperating agencies that get involved. So there is a mechanism to do that.

>> My question was on how programmatic EIS differed from a local one because normally on NEPA that.

>> And my understanding is it done change on a programmatic level as opposed to a local level.

It's still the same process.

We still use the same process.

>> Thank you.

>> My turn?

Okay.

So we want to take a break.

We want to take a break for two zero, 20 minutes.

We will begin at 10:20.

Two quick thing before you do that.

I know it's been cool in here this morning.

We have asked twice for that to be -- cold, right.

I'm going to say we went from cold to cool.

>> Absolutely perfect.

>> So we are apparently cool, and we have asked twice to have that register fixed, so we're going to do that.

Next comment, on the public comment period this afternoon, which will be begin right after lunch, you will have until 11:00 to sign up.

Advisory.

There are currently 32 people signed up to speak.

In 90 minutes that means you have just under three minutes.

So we'll see if we get additional sign-ups and we'll see how we're going handle that this

afternoon.

Just wanted you to know that.

See you at 10:20.

>> Okay.

So as Dr. Cope said, we're all getting ready so take your seats.

And we will begin again with a research update, Zach Ryan hold from the Washington, yes, Washington office but housed in Reno with Nevada office will provide for us.

And I am going to have to do your slides for you.

>> Zach, before you get started, I neglected I had one more comment to make before the break so in the zeal to be on time we jumped over John.

If you would like to make a comment on what we were discussing prior to the break.

>> Thanks, Boyd.

And it's a little bit repetitive but I wanted to follow up on what Callie brought up a minute ago, as far as all the things going on out there in the public and the timing it takes here, the degradation on public lands is probably one of the most serious things we've got going out there for these horses, and it's frustrating for some of us to be able to stand by here and see what the BLM has to do to jump through their hoops to get a NEPA process, and in the meantime these populations, if we're not careful, are going double, and we're already in serious, serious trouble as far as the resources is concerned.

And it was interesting to me because yesterday when we were on the tour and we were coming back across on the Mormon trail, the divide trail, all these trails that's in the same trail, and all these people across this country years and careers ago, and the leader in our car was explaining the degradation that took place on that trail and he said we're still seeing the recovery of that abuse.

And that was a long time ago, folks.

And we need, if we're not real careful, we're going to be back in the same time frame here if we don't get a handle on these horses in some way, shape or form.

And so we've got to stay with all the things that we're talking about here, and if there's anyway in the world that the BLM and the leadership there can actually take a serious look at this and I know I've talked to Greg, there's ways that they can maybe speed up the process, but it's imperative that we do.

Thank you.

>> So why I implementation.

Zach, you were giving us a research update.

It really on a time line to find solutions of what's going on on our public land.

I apologize for jumping in you're time.

Go ahead, Zach.

>> No, that concludes my presentation.

I think we can go to the next slide.

That's a horse and that's a burro.

Next slide.

Y so just kind of a summary of what I'm going to be covering during my little spiel Next slide.

In order to look at and help us try and answer these questions, the national academy of science, well, we went out for request for applications looking at something that meets all three of those needs.

When we did it, I guess we announced the proposal, the request for applications, and had it open for individual from universities, non-profit organizations, and other interests to apply to help us develop these and respond to a request to help us do this.

As a result of that request for proposals or request for applications, we ended up receiving a number, more than 20 different responses to our solicitation.

Of those 20, there was a technical proposal evaluation committee that was established to do a cursory review of very high level review of those proposals, and determined which of those proposals actually fit the needs of the request and were relevant is and were worthy of going on for further review.

And when I say "worthy," I mean there were some basic threshold requirements that it be new, that it be innovative, that it actually be a scientific study, not just a action plan or something that was proposed, but it actually had to have a question, something to be studied, something to be answered.

From that point we identified the need to bring in a certain set of expertise, one that we believed that we did not have given the current tools to review those proposals through the bureau of land management.

We are a land management agency and we don't necessarily conduct a whole lot of research.

We leave that to various different organizations, such as -- or agencies like the U.S. geological survey which then conducts the research arm.

It's kind of the research arm of the Department of Interior, and we'll utilize them, and I'll speak about that a little bit later as to what some of the studies that they're going to be helping us with.

So in order to try and identify and refine and get that level of expertise, we determine that it would be appropriate to enter into a contract with the National Academy of Sciences, to go out, look for those specific expertise after they reviewed the proposals, and be able to look at the scientific integrity of the proposals themselves, look at some of the practical implications, and come up with recommendations to the bureau of land management on which different studies they believe are the most feasible, the most reasonable, and allow us to make a determination on which ones and kind of give us some guidance on the priority for funding the research and the studies.

The National Academy of Sciences, that team is currently being identified.

They are in the process of, I believe they have received those studies, are in the process

of identifying the expertise that will be required.

I can tell you that the proposals go across a range of different or a range of different methods, some of them are surgical in nature, some of them are I guess pharmacological in nature and deal with various different mechanisms.

So there is a broad spectrum of disciplines that are going to be required to look at these proposals.

So they're in the process of identifying those.

They will have a core membership team or a core review team.

If they feel that it is necessary, they will go off and find independent experts to serve as sort of ad hoc experts in a particular field in order to clarify certain questions.

Once they've done that, they'll provide those recommendations to the bureau of land management, to the technical proposal evaluation committee.

They will make those recommendations to management, and management will have the final decision as to the funding priorities and the research that will receive the funding and be conducted.

Are there any questions for me on that?

>> Over 20 submitted but how many made the cut for a final review?

>> So there are particular procurement policies and guidelines that are out there, and we're not actually authorized to disclose the total number that are still under consideration.

That is something that is in our procurement standards.

But there are a number of them still under review, and so there are reasons for that, and it's to help us later not negotiations with the agreements and make sure that we're getting a fair and competitive deal for the American taxpayers under these agreements. So if we were to divulge how many are still in consideration, it kind of takes away the competitive nature of the review when we go back to discuss that with the individual applicants.

Does that answer your question?

>> Well, not actually because part -- if they had a proposal, they had to have a price with it, right?

If this is a -- are you saying that you haven't actually solicited a contract?

You just asked them for what about doing this and how much you think it would cost or what exactly was the RPFs?

>> So there's a difference.

These are not contracts.

These are agreements.

Under the agreements, they submit a very cursory budget to us as part of the proposal process itself.

However, unlike a contract, we are given a lot of leeway and ability to go back and the agreement is actually really done and negotiated at the very end of this, is when we

really get into the nuts and bolts of actually talking about the agreements, the sides or what actually the government will put forward, cost shares, things of that nature.

That all at the end of the process when we have nailed down those specific figures.

>> Zach, as you're going through, all those things you told us about sounds like it could take forever before we get to that process.

So what's our timeline for when BLM will be able to say or enter into one of those agreements and move forward with it?

>> Zachary Reichold: And I sculptured that and we're hoping to have a decision, not hoping to, wearing going to have a decision from that review panel by December.

So it is kind of a lengthy process but we also -- Ill ever they're very technical props, and again, like I said, there's a lot of different disciplines and I know we want to make sure we get it right, and that's the concern with the national academy of sciences.

They've done these types of reviews for other departments and agencies and things of that nature and so they're familiar with it and so that was the timeline they gave us.

We tried to compress the timeline a little bit, but if we compress the timeline too much, we start getting into interfering with the integrity of the process and potentially the outcomes.

>> The recommendations from the NAS panel in December, and then additional recommendation for priorities are in January, so in terms of Callie's question, it would be further out than that, is that not true?

>> Zachary Reichold: It was 120 days from the original signing of the contract with the national academy of sciences was kind of the first time that they said that they would be able to give us kind of a cursory review and understanding of where we could potentially go, and then it may take a little bit longer than that given their processes to develop the actual final hard copy recommendation and move forward with actually, but we should have some sort of indication so that would put us in -- help me out here -- April, May.

It's August, September, October, November.

So November, December.

So we're still looking about the same time frame.

>> So what Callie is really after is past this slide, so NAS is going to respond to us in December.

We're going to get a list to evaluate in January.

What's the next step after that?

When do we expect that we're actually going to be signing agreements and research will begin?

>> Zachary Reichold: It comes fairly quick.

Most of the process is in, the time is taken in awarding the actual agreement itself and the review of it, so as soon as we get done with the review and they make their recommendations, I can imagine that thing would happen fairly quickly after that point.

It doesn't take us very long to actually sign the agreements.

There's probably going to be a ramp-up period for the scientists once we identify that we're going to move forward with a particular study.

That could vary depending on the requirements of the study, as far as if they need to acquire new types of equipment and things of that nature, so it could vary depending on the actual proposal itself.

So I can't give you an compact time frame.

I can -- an exact time frame.

I can imagine some of the surgical techniques and things like that may be, could be implemented a little bit quicker than some of the other ones where they have to formulate maybe some sort of vaccine or put them into a different delivery method or something like that, so it depends on the unique nature of the actual proposal itself.

>> Is it fair that these have been submitted as applications as grants so they should be relatively developed.

Are you saying by pretty soon, and not very long we may be doing something by summer?

>> Zachary Reichold: You're implying that I'm being vague in my response.

>> Joan Guilfoyle.: I think Zach is being very precise.

Everything what he said is true but as soon as we have decided the priority of ones we have fund, and we have the funding, we will launch these as quickly as possible.

That's the truth.

It does take some time.

Depends on which ones with those qualifiers.

>> Is it conjecture?

>> Joan Guilfoyle.: It depends.

We don't even know which winds are going to be approved.

But we will get the money in place as quickly as we can.

You have that much from me.

>> So in layman speak the NAS is examining the applications and you can fine tune the parameters so that you can then put a budget to those parameters for each one of those applications, and that's the hard work.

Then it gets laid to you guys, and you guys get the funding stuff squared away and then they go the to work.

Is that my understanding?

>> Zachary Reichold: Correct.

NAS is also going to be looking at what's in the proposal and the costs associated is fair and reasonable.

That's part of the reason why we have the ability to go back, and if we determine that it is ooh not fair or reasonable, we can go back to the applicant and look at potentially providing them with something we have that's organic to the agency such as a facility

or something look like that.

That's where the negotiation comes in.

>> There's a negotiation process, and once that negotiation process is done, which you're saying will be done by September, then it's pretty much one foot in front of the other.

>> Zachary Reichold: No, the review would be done by the academy of sciences, and then it would be up to us to determine the funding priorities and prioritize that and make a recommendation for management to decide.

>> So like cope so eloquently stated, maybe by summer?

>> Zachary Reichold: Maybe by summer.

I can imagine that that's possible.

But to continue with the vagueness of my answer, it could take longer.

We really are -- it really is dependent on the actual proposals that were submitted, and in order to preserve the integrity of the process, those proposals are actually only given to the technical evaluation, proposal valley yeas committee.

So myself and -- evaluation committee.

So myself and management in order to keep from influencing the decision-making process, we haven't been given those proposals to review so we don't know actually what's in the proposals themselves.

>> Joan Guilfoyle.: The other piece that I would like to add to this is obviously when we decide which research projects based on NAS's recommendation that we have the best, solid study design, the biggest bang for the buck, that we implement the ones, then I will be wok working with the leadership in the field to say where the MHMAs are going to put the money to work.

We want these on the ground as soon as possible.

You have my word on that.

>> We have in keep in mind how many decade weave been dealing with PZP and we're still doing studies.

I think the one benefit surgical studies that we're not going to have to reprove the efficacy we'll prove the behavior, the safety to the animal, can it be done in the field, what are the applications.

So I think those are things that can be defined a lot quicker than starting with a new PZP to take ten years to decide if it's going to be a long acting agent.

>> Joan Guilfoyle.: To determine the method off permanent sterilization like that is one thing but if you do know if method is safe on these animals and done, you do know that those mares will not have a brood.

>> Bob Spratling: We don't have to determine the efficacy.

That was an important part of it.

In the Andy after a lot of years we find out wants quite as effective in the field as we thought it was going to be or hoped it was going to be.

That's the outlook of the Dustin proposals you will have to look at.

>> Zachary Reichold: Tells exposure in a non-target species, the exposure into the environment and things like that have to be considered and non-surgical.

>> Boyd Spratling: If you're thinking non-surgical, that's in the environment.

But surgical is going to be the benefit those proposals in my mind.

>> We've got less than ten minutes on this section so I just want you to be mindful of that.

>> I've only got a few things left.

So next slide.

So some of the population growth suppression research that we're actually looking at is, among other things, our gelding as a component of a, it should say a non-breeding herd.

It's very difficult for them to breed.

Sorry.

My typo there.

And again just look we discussed, surgical and chemical permanent methods of sterilization in order to implement those on the range as well.

Next slide.

I alluded to the fact that the USGS is the research component that the BLM generally uses to conduct some of its in-house research.

And these are some of the concepts, and basic ideas behind what they have proposed and what we have asked USGS to look at, and for future studies.

So looking at fecal sampling as a method of looking at the genetic diversity and viability of certain populations, developing and testing radio control collars as well as tags so that we can track the movement of animals in order to assist us with future studies, effects of wild horses on plant communities across the product of gradient, basically looking at, you know, how they use red, all the way from the lowlands and the mountains and the upper areas.

Carrying capacity, modeling, looking at once we tie that into, you know, looking at the productive gradients and how they utilize those, maybe coming up with a model that can help us assess the appropriate carrying capacity, that can also assist us in looking at appropriate management levels and forage allocation.

We're looking at population and economic modeling to look at if we identify or when we identify a specific tool, management tool, what are the costs and what are the benefits for implementing that tool or what are the costs by not implementing that specific tool.

And then the last one is sentinel population studies, looking at how individual herd characteristics, those herd characteristics, how they utilize certain areas, and kind of giving us basically an indicator herds or bands so that we can kind of look at the overall health of a specific area based on indicator species or an indicator herd.

Any questions?

Next slide.

Shade study is being conducted by UC Davis at PVC.

They're looking at the, evaluating the use of shade by compromised and healthy horses.

It's in progress, and we're expected to get our results in November with a report and a manuscript that will follow.

So that's kind of the update on that.

Now, in the interests of time, we're just kind of going through these last slides fairly quickly, so I have nothing else and I'll turn it on to Sarah unless there's any one last question, any questions for me.

No?

All right.

Sarah.

>> Sarah, you have 30 seconds.

>> Sarah Bohl: Socioeconomic is oh more important than 30 seconds.

We're undertaking three socioeconomic projects.

The first is a's knowledge study.

The NSA suggested that we look into knowledge and values.

Specifically we want to probe the relationship between knowledge, values and preferences for how wild horses and burros should be managed, and we want to look at things such as how do people view the tradeoffs that must be made when you're trying to manage for multiple values, so we want to look at their attitudes and knowledge and preferences around that whole subject.

We envision that the study would collect primary data from interest groups and also from the general public through a national sample.

And where we are with that study is we are reviewing proposals and hoping to select the preferred provider in mid-September.

The second study that we're doing is a demand study.

We've talked a lot about the falling adoption rates.

But we actually really need robust. to tell us what the demand for adopted animals, animals for sale, and furthermore what is the demand for provision of long term holding and ecosanctuaries.

So that research project, the solicitation closed on the 20th of August, and the methods that that study would engage would be analyzing existing data and surveying or interviewing other potential or current adopters, purchasers, or the folks who might have ecosanctuaries or long-term holding.

The third project that we're doing in the socioeconomic area is an analytics deliberation pilot.

This was another thing recommended by the NAS.

AS talked about the collaborative approach to looking at stakeholders and they looked at several models and recommended that we trial the use of analytics deliberation. So this will be done, we have some great in-house resources who have done a lot of work on riparian issues engaging stakeholders in a very collaborative way, and we would like to apply that model to the wild horse and burro model through a pilot project. Basically analytics deliberation is based on a couple of principles, transparency, community participation, and engagement, and research that the NAS cited found that decisions of specific content will have greater support if they are reached through a very collaborative process with stakeholders.

So are there questions I can answer about the three socioeconomic research projects?

>> From a socioeconomic effects of this I see a lot more social than I do economic.

Is there a potential at least going back on what John said earlier as part of the economic studies you're doing, is this part of programmatic EIS to assess the economic effects of the research project that John referred to?

>> Sarah Bohl: That would not be in the scope of these three projects that I described.

>> They're in there as well?

>> Yes.

>> Boyd Spratling: Other questions?

That concludes -- you're done.

Thank you, Sarah.

Wait a minute.

Callie always has a question.

>> Is there a way we can get a copy of this presentation?

Like at lunchtime or something so that we can have it to be thinking through as we make our comments.

>> Sarah Bohl: Yes.

I will see if I can get a paper one.

Electrically I know I can.

But I'll see if I can get you a paper one.

>> Thank you very much.

Appreciate that, Sarah.

>> Boyd Spratling: Thank you, Sarah.

>> Joan Guilfoyle.: I think Terese Johnson is on the phone.

I don't think we need to have any questions but just to acknowledge that she's out there.

She's our research coordinator.

>> Boyd Spratling: Lurking.

>> June Wendlandt: Didn't need her now.

>> Boyd Spratling: Are that we'll move on to Barry Imler, he is the rangeland program and manager for the U.S. Forest Service.

Welcome.

>>

>> Barry Imler: Thank you, Boyd.

Pleasure to see all of your smiling faces again.

Corning, Kathie.i.

I'm going to deviate a little bit from the way I normally address the board in that I don't have any kind of a presentation.

I did bring a presentation this time.

However, I'm still not going to talk about what's in the written report unless you have questions when we get done.

Due to some changes in the national office funding for wild horse and burro program within the Forest Service and an increasing level of interest in the program, in Forest Service interest in the program from the public, the regional range program managers from five of our reasonings responsible for management of the horse program decided that they needed to call a meeting to figure out how we develop a little bit more consistency across the regions, how do we develop a little bit more clarity and direction within the agency, you know, are there any other issues that need to be addressed from that kind of a standpoint and how do we address those.

The meeting happened in early July.

Ralph Giffen, Tom Foley and I showed up primarily to provide background information to these folks and also to be there as advisers.

As they work through their issues and their concerns and their discussions.

I need to be clear that this action plan that they're working on is a deliberative process.

They're still developing it.

They will be developing it for a while.

Now, the issues covered, the issues and concerns that were identified were divided up into seven topic areas.

And these folks at the science assigned task groups to focus on the issues addressed to each group.

Timelines internally and when they expect on to have reports back from the various groups from the program organization.

Similar to how you folks have been operating with your subcommittees.

They set some dates.

I think some of those dates are probably going to be adjusted.

Part of that is because we discovered very quickly the first morning that some of the folks sitting there in the room that are responsible for the program didn't realize the Forest Service had any responsibility for managing wild horses and burros, so we had to have a bit of a learning session that morning.

I think they were probably a overoptimistic when they set some of these dates, but in some cases things may not take as long as they who the because a lot of folks in the

room didn't realize how much of the work they needed to do or thought they wanted to be done has already been accomplished.

We just need to get it in a central location so they can see it all.

You know, under the definitions and direction group or organization or grouping, the initial date they set was September 30th.

At the end of next month to develop a tool kit to address external management proposes Pap we're getting to the proposals similar to BLM, getting p some comments from the public, some ways to deal.

Folks would like us to deal with horses.

We have changes on how we deal with horses.

We need to figure out how we're going address those types things when they come in.

As an agency, so we're somewhat uniform in how we respond.

And the biggest one that I think times are going to have to be adjusted on is the developing definitions and protocols.

I think this is only more of an effort to gather information that the Forest Service and BLM and others have already generated.

These folks just were not familiar with it.

And we're going to address some inconsistencies in some of that information.

And also how it's being -- how it's being implemented in the field.

They also decided they wanted to describe and define thriving natural ecological balance by December 31st.

One has some suggestions with Forest Service ecologists, some of the other ecologists, and find out what information is out there, what definitions are out there, more than what's in the act and our regulations but what else they need to be considering.

You're obviously watching over my shoulder.

The next grouping was interagency coordination.

It was hoped to have things done by this September again.

First off was gathering all our existing agreements in one location.

This is primarily an internal issue, trying to get -- find out what do we really have, where do we have it, and get it all into one location so everybody can see what's going would be everybody is working from the same set of information, same base.

And develop is on the coordination protocols for the areas managing with the BLM.

This is going to require coordination with BLM, some at the local level, some at the national level.

There was an expectation that the Forest Service units are going step up and talking and coordinating a lot more closely with the BLM field offices, whoever is managing the horses in those areas, especially the joint management areas.

And by the end of the December help to develop a template -- there's my typo -- regional agreements with BLM and state offices.

Again we're looking for consists web improved efficiency and there's going to be

coordination with BLM at multiple levels.

The next grouping castle with funding and target changes.

That was primarily internal among the regions, and it related a great deal to Tom Foley's position and duties and how this were going to coordinate with each other and Tom as far as buying his time, putting his efforts to good use, and not getting in the way of each other, trying to get things accomplished.

We also have some operational considerations.

Again by the end of next month, trying to identify contracting officers with wild horse and burro contract experience within the Forest Service.

We have a few.

We don't have very many.

We may have more I think than we realize, contract officers tend to stick around a long time with us, and we used to do some of our own gather and is some of our own operations.

And then identify the skills our folks need to be CORs, and part of that identifying is skills is going to lead us into developing the necessary training for taking advantage of training that's already offered through BLM or some other opportunities.

Moving on by the end of the year, identifying the training needs for range management specialists and how to deal with wild hoarse and burros.

We don't have a separate organization within the Forest Service for wild horses and prose.

Tom may be the only person in the agency who spends his time working on that program.

Everybody else it falls on other duties as assigned and part of they are other duties and responsibilities.

We're looking a developing a list of common equipment needs.

We haven't done much internal well horses probably in close to 30 years so we know we need to replace some equipment and we need to purchase some equipment, establish some facilities, what do we need and where do we need it.

And then working on some checklists for gather operations.

Again they're working at consistency and efficiency.

Management plan contact.

I think this is something I talked about at the last meeting.

Our NEPA planning.

Before we do work on the territories.

That's our version of HMA for anybody who is not tomorrow familiar with the difference in terminology.

At this point most of what's happening, there is a lot of coordination happening at the regional and national level as far as making sure we have consistency and how we move it forward with our planning.

We also realize that we need to talk about or we have requests from some of the regions and some of the forests that we DROP a framework for managing plan components.

Not cut and paste things on what goes into the document but a format so folks know what the document should look like, what the plan should look like, what all should be included, what should ebb we possibly not be including in there.

And then when we moved on to our NEPA considerations, part of the plan development, we're back again to well we need a centralized location for all of our program reference materials.

Our hope is that by the end of next September.

We're starting down that road.

We'll see what happens.

Part of that's going to include, one of the things requested was from our attorneys, so a list of all the, copy of all the litigation that's occurred with the program, both with BLM and Forest Service so folks have an idea of what actually was in the complaints, what was actually in the rulings.

A great deal of that information is whatever we can grab ahold of at the moment.
grab ahold of at the moment.

We're looking at by the end of next year trying to create desk guy for the four supervisors.

These are our line officers.

These are the people who actually sign off on or manage the program at the forest level and they direct the district rangers at the local level.

What we heard at the meeting in July was these folks need something that's easy to read, relatively simple, understandable information, giving them some guidelines on what it is they need to be doing.

Some snapshots with some detail.

Again we're hoping for a year out.

I think it may move a little bit further.

And that last thing on this particular slide I'm talking about framework components, specific to wild horse and burro decisions, wean Larry looking for consistency and some efficiencies.

The group identified things for future discussions.

They ran out of time.

Effort, energy, and some things they said they want to talk about a later date and do need to be talked about at a later date deal with the centralized, trying to get the centralized advisory team together.

Folks who have experience and knowledge about the program.

Or as they gain experience, expanding that group.

Try to have a resource of people available to answer questions as issues develop.

How do we deal with our current situation?

We're at 285% of ALM right now or in July for our territories.

We know we've got a problem but we also, we're focusing and trying to get the process in place quickly so we can start addressing the problem.

We talked about the broad scale analysis of the project NEPA.

It's probably not going to be programmatic NEPA on the Forest Service side.

We have a number of other higher priority issues that we've been trying for years to get through process at the national level, and it doesn't happen.

Our expectations, what we're probably going to be doing is pulling together a series of white papers where we basically compile and consolidate related topics out of a centralized database into documents that will local folks can cite as they are doing their local project NEPA.

I don't anticipate we'll have another large meeting.

It may happen.

By large, I'm saying we probably have 15, 16 people here.

We had the regional office folks, folks from a few of the forests and districts.

I suspect that the discussions will continue and we'll work through our monthly range program manager calls.

I don't think there's anything specific to the horse program again.

But we'll have to see how that turns out.

I guess kind of as an aside, when we pulled the folks together for the meeting with the regional program managers and their supervisor showed up, we made it very clear that we wanted to limit the number of people present in the room who had previous experience with the program.

We wanted fresh eyes to take a look at our -- the laws and regulations that we operate under and what policies we have out there and see what they came up with, knowing that we had enough -- we thought we had enough people in the room with past experience that we could offset any potentially wild ideas that might come up or try to lend maybe a touch of reality to some of thoughts that people had.

And that concludes.

>> Boyd Spratling: Any questions for Mr. Imler?

So you're looking at this to just make your -- just say the effect in the field.

Is this going to make it more efficient to get through your process?

Or what are your goals here with this planning process?

>> Barry Imler: More efficient.

More consistent.

Operations across the agency.

Knowledge, an increase in knowledge for our folks and what their obligations really are and what their options are and how to deal with those obligations, how to answer those obligations.

And one thing that has driven this is my direction, the direction I've received is that as of last October 1st we were not supposed to be putting in you more animals in holding facilities, and we were supposed to be working with trying to get the ones that are in there out through adoptions or whatever means, but we are not, as an agency, I've been told that we are to minimize or eliminate the idea that we're going to be putting any more animals in holding.

And that caused quite a stir in the field.

>> Boyd Spratling: I would imagine.

Any questions?

>> Three comments and ideas and possible lessons learned from other activities we got.

When you've got something in here in your definitions and direction war, you're talking about developing definitions and protocols.

Something that came up was launched Tacoma in another committee is develop an interagency glossary so that the definitions for one agency were the same for another.

What a concept.

This just came out on ETA's session.

We're saying everybody needs to be dealing from the same page of definitions, and I would like to see you reach out to some of the other agencies when you're making definitions does this work for you so everybody can agree on developing that.

I would caution, however, when you're defining a thriving ecological balance, that's a pretty deep quicksand you're wading into right there.

I would recommend instead that you could develop local standards, for starters get this really nice definition, and climate change effects that as well, so it's going to be a dynamic process.

And then instead of developing a static definition for this natural ecological balance if you would apply the theory of, so you monitor and put forth a hypothesis to monitor that change and if it works stay with it but you have that continual monitor, I think you will find that much more applicable this a single solid ecological balance.

I think you're going to try to get in trouble if you assume that's a static ecosystem out there because it's not.

Lastly when you talk a handbook fore forest supervisors I ask that you coordinate that because a lot of that work is in the process that can be taken from that group that's been going through the directives on the p planning process so there are some things that you can work with.

>> Barry Imler: Just so you know, the first two items that actually is the way we're doing things.

We made it clear to folks that a lot of information is out there, definitions are out there.

BLM has put a lot of effort into this over the years.

We don't need to be out there reinventing a lot of this.

Climate change was mentioned on the thriving natural ecological balance, and the person who is heading that up, she was very clear that there would not be a static, nothing is static out there.

The third one, I'm not sure how well that works because we're talking two totally different things but we'll stay in touch with Tony and his staff.

>> Remember the definition that to steal from one person is plagiarism but to steal from many people is research.

Research can play a big part in this.

>> Boyd Spratling: Any other questions for Barry?

Thank you very much.

Appreciate it.

Now I'd like to introduce Dr. Steven Petersen, and he's going to -- his topic is going to be on the fundamentals of range management, he is a professor of rangeland landscape ecology and GIS department of plant and wildlife sciences at Brigham young university.

Dr. Petersen contributed to the ALS study on the program that was just released six months ago or more so it's important that we wanted a person to presented to that had the credibility and was familiar with the topical issues that we have going in the wild horse and burro program.

So with that, welcome, Dr. Petersen.

>> Steven Petersen: Thank you.

I appreciate the invitation.

It's meaningful to be here and share ideas with you.

Very nice of you to invite me to be here.

That was interesting for me to be a part of.

I learned a lot and it was just a fascinating process to be involved in the NAS report.

Just a little bit of background, I got my Ph.D. at Oregon State University at the department of natural resources, a great place to cut my teeth in the rangeland concepts in the eastern part of the state.

Before that I was at Brigham University of Utah and I was in the rangeland systems.

Since I've come to BYU I was a professor but I've moved over to BYU the last seven years, and some of my projects have involved wild horses so I do have research and I'll show you a few things I've been doing with that work that I think would be applicable.

The goal today to cover basic concepts of range management.

We have classes.

We spend an entire semester covering this stuff.

And it's great.

I'd encourage anybody in this room to take some classes in range management because there are so many things to think about that are applicable to this discussion we're

having today.

I wasn't invited by the SRM.

I was first contacted by to come and be a part of this meeting, and I appreciate that invitation from them.

One thing I did is I looked up the mission statement from the SRM organization, and this is what they say.

Society for Range Management is the professional scientific society and conservation organization whose members are concerned with studying, conservation, or conserving, managing and sustaining the varied resources of range lands which comprise nearly half of the land of the world.

That is their primary goal, is to make sure that the lands, the resources are protected, they're conserved.

There's that element of stewardship which is what I'm going to emphasize today and I think is a major component of what needs to go on in these excisions.

In western sides United States these are sensitive lands and we need to manage them carefully.

I think BLM has done a lot of work in that area and appreciate the opportunity to come again.

Next slide.

When we start thinking about the main concepts of range and range management, the ideas that these are renewable resources.

We need to protect them.

With the idea of stewardship, that we're going to maintain adequate resources such as soil, water, vegetation and climate for years.

And that takes a lot of effort.

There's a lot of planning and a lot of thought that goes into that.

Along with that to maintain these plants that the harvest rate and energy converted to chemical form.

That is just critical for sustaining life.

And also for sustaining these grazing animals that use these sites.

Finally, then, with that concept of range management is that this thought or theory-multiple use.

That is just a fundamental idea of collecting, acquiring food, water, wildlife habitat, recreation, ecosystem dynamics, and I'll talk a little bit about throughout this discussion today.

As I can through this at any point if you want to stop me, what I'm saying and make a comment, do not hesitate.

If you have any questions, please feel free to jump in and I will answer those as we go.

The two most fundamental things to understand about range is this, that especially in the west precipitation dictates a lot of the outcome of what we see.

It is, according to current theory, statements and books, if you read this, they will claim it is the single most important factor concerning the type and productive of vegetation. Out here in the west, that is the statement that needs to be identified, that through drought, temperature fluctuations, that is what drives the ecosystems that we see, how they respond to this multiple use is going to vary.

And to have a good sense of what drives those processes, we'll talk about that, but that's an important body of knowledge to have in front of you.

Along with that is soil, which also is a major factor that drives forest production.

This is going to be a combination of, as far as the texture goes, a combination of clay, silts and sand, and how that structure of that -- how the texture and structure of a soil is presented will absolutely influence the vegetation that grows there, and having a knowledge and understanding of soils can lead into some very effective management of range lands.

They're not uniform.

They're not static.

These things.

They are dynamic in your nature but having that basic knowledge be important to whatever activity or use is in store for them.

Death and organic matter a couple of items that need to be included in that list.

So when it comes to grazing management, which is a fundamental aspect of rangeland management, again, this is a common statement that needs to be identified.

Animal density.

So when you're talking about stocking rates, that is the most important.

This is not my words.

This is out of the range management book says think it's the most important of all grazing management decisions, and I would back that up.

Whatever is going to be out there eating that forage is going to potentially drastically influence the outcome of that site momentarily, short term as well as long-term and I'll give you some ideas of that here in a bit.

So that would involve frequency, the intensity of grazing with be the duration of grazing.

Good land managers have a sense of how long and how really the ones who have been there working the field for a long time, when you talk to managers who have been in there, in the field working with the BLM or Forest Service or on their own land with the NRCS, they get a feel for this, and it's critical to really have a good understanding of how stocking rates, how those animals are going to influence those sites.

They have a term called carrying capacity or grazing capacity, and that is the maximum stocking rate year after year without causing soil -- or damage, I'm sorry, damage to vegetation and natural resources.

So knowing what the carrying capacity of a site is, is going to make a huge difference in

the number of animals you're going put out on the site.

And I'll get into different types of animals and how they influence these plant communities but understanding what that maximum stocking rate is going to be for a site, that's critical.

And the way you get to that is again knowing your system, understanding how they function, but also doing rangeland inventory and monitoring.

Cannot emphasize that enough as well.

That it requires somebody to has a good understanding of the types of plants, the soils that are there, the climactic conditions and from there you can make decisions about what you can do to persist or to have a stewardship kind of approach of long lasting resource conservation.

And then often we talk about the community level response to grazing, but I would emphasize that it comes down -- the idea of understanding community is very important and influential but knowing individual species and their characteristics is very, very important aspect of this and I'll discuss that here in a moment.

So to go down to the basic plants, that grow on these systems, grasses are a very fundamental part of these rangeland environments that do get used often.

They consistent of really consistent parts.

A phytometer consists a leaf, a node, and I'll diagram this.

The node is the junction that occurs, the sheaf is before.

There's ab auxiliary bud that that allows the plant to grow up to its maximum size, as well as the water and nutrients in the soil.

The internode between nodes.

That is the consistent part of a grass plant.

Plants like this, something has been eating these plants for a long week long time, thousands of years things have been biting plants just like this.

And -- which is nice.

That's a great thing because now we've got plants that can handle being chewed on by different organisms.

Whatever livestock class, whatever animal that's going to be a grazer is going to have an impact on these plants but the response is on going to be somewhat predictable because against these plants have been dealing with this for a long time.

One of the most effective things about a grass plant is their ability to respond to grazing.

And a nice thing they will do is they will do what's call tillering web where you get multiple branches.

You can bite off that stem that's the tissue that allows the plant to grow in height, but if you bite that off, it will branch and there's other types of tissues that are growing points that allow that plant to branch off in the form of what are call tillers.

So a bunch grasses, they will be a few stems in size initially but they will continue to

tiller out until they're a large massive plant, and that again can be grazed with time and to a certain amount before there's a detriment to that plant.

There's also certain characteristics, rise ohms or stems grow below the ground, others that grow above the ground and allows the plant for spread, reproduce.

What I would emphasize in this discussion that every species has its own unique traits, has its own unique characteristics and how it responds to grazing will vary.

So a manager that's going to be effective ought to know these species effectively, ought to be able to walk out to a community of plants and look at them and know what they are and how they're going to respond to being bitten and again they don't all respond the same way.

So anyway, last statement there is about the root system.

These plants again are, many are adapted to limited soil moisture content.

They also have an ability to grow very, very limited nitrogen content in the soil which makes them effective in these rangeland environments we're talking about but understanding how they work is.

Here are some things.

If the plants are going to be chewed up with an herbivore, the competitive removal of plant can destroy the photosynthetic abilities and if it's bitten over and over again.

They require photosynthesis to great create resources to go into growing for metabolism and also for storage, and if that tissue is not there, especially in key elements of the growing period, then the plant will suffer over time.

What was I going to say about that?

It will come to me in a second.

So the other thought is that the vegetation residue, so as plants ever getting bitten off, there's a need to have some of that residue remain in place that is used to protect the roots and the crown of the plant where the growing tissues are at to allow to continue it to tiller or to grow up.

If those plants are hit too hard and again too frequently it can cause damage to plant that it will not be able to respond after that and can potentially die from it.

And then finally plants that are highly resistant to grazing are generally less palatable and palatable than plants that grow with less grazing pressure, and the nature of that is those plants that are being chewed on a lot, sometimes -- I shouldn't say sometimes.

Again, years, generations, a long evolutionary perfected being chewed on, plants have in many cases evolved characteristics that allow them to defend against that.

Sometimes it's putting secondary chemicals or compounds into their tissues, structures that can deter grazing.

That requires energy and it takes away from growing a biomass that a plant can potentially produce.

So as a result those that get grazed on a lot, the plants that do survive are often not as high in biomass or not as palatable that would receive less grazing.

Next slide.

So again thinking about individual plants, and here's an example of Blue Bunch wheatgrass.

A very important rangeland grass throughout the western United States.

It's a native that's been growing here for thousands of years.

We know that since the last ice age that plant has been around and it's been dealing with this, being used by herbivores for a long time.

So there's been some research done on to see how it responds to different levels of grazing compared to a plant called crested wheatgrass and crested wheatgrass comes from the old world.

It was introduced here for purposes of increasing grazing potential, and it turns out it's a very successful plant.

It has been used a lot in seeding mixes especially back in the '40s, '50s.

We pointed that thing everywhere.

And it's been good.

It's a good plant for providing forage for animals.

One issue about it is it's not native and we could have a long discussion about using native versus non-native plants.

That plant, it is relatively competitive and so when you put in a plant community mix, it will often persist and even to the compromise of other plants not being able to compete with it.

Again there's that issue of do you plant it or not.

The fact is that there's a different response to these different plants.

This case that study was done by Caldwell in 1981 so this was a very interesting study called coping with Herb I every, the resource allocation to semi arid Agropyron bunchgrasses.

It sounds boring but it's really quite fascinating.

What it says -- I encourage everyone to read this paper.

It's a fundamental basic paper to read through and you will be interested, I promise.

So after you have grazed these plants down, the response is this, crested wheatgrass will establish a canopy three to five times that of as far as the photosynthetic surface to be able to produce glucose for the sake of that plant three to five times more than Blue Bunch wheatgrass.

It has got this ability to respond to grazing.

How that came about is a longtime evolution of being bitten.

Crested wheatgrass has a lower investment nitrogen and therefore it's more tolerant to partial grazing than Blue Bunch wheat grass.

And finally it has a created flexibility of resource allocation.

So if two plants are going up, if a Blue Bunch wheatgrass plant gets bitten off, it will have to draw from its current resources in the stems and leaves that got left pinned to

pull it back into producing new biomass for that plant or it goes to the roots to pull out resources that are being stored there as carbohydrate reserves.

The same thing is going to happen to the crested wheatgrass plant.

The point is that Blue Bunch is not as effective as pulling out and distributing its resources as carefully, effectively and therefore it takes a lot more of that resource to pull the plant back you.

If a Blue Bunch wheat grass plant gets hit multiple times in a growing season it can cause serious problems.

If it is done two year's, it may be gone the following year.

If you do that to crested wheat grass it has the ability to store carbohydrates very well and keeps drawing from them.

The last statement on there, both of low carbohydrate pulls and leaves and roots with severe dehydration.

If they get bitten extensively over years, either one of them, they will not persist.

It will doesn't matter what the grazer is.

That is going to be the response you're going to have.

Getting back to this point of understanding individual response of these plants to grazing is key to success and survival in range management.

That sounds like a very drastic statement to make.

But that's just the nature of it.

So having managed on the ground to know those plants, how they're going to respond, and then do this inventory and monitoring of those plants, that's a recipe for success, in my opinion.

And now on to the grazers.

And again there's a whole course on this stuff.

This is, animal digestion, and this is just a brief statement.

There's ruminants and hidden gut and cecal, a different type of digestion the animals will use.

The way they process that forage depend on the animal, on that type of system they have.

So cows are ruminants, rabbits, row bents are hidden gut fermenters and the system, the horses or those one that are hidden gut fermenters have a stomach that is 8.5 to 10% of capacity of their system.

That is a system that is driven by enzymatic or gastric juices that digest down until they get to the behind gut.

It's not as efficient as a Ruminant.

A ruminant will be able to digest things down such as cows who have that fourth stomach and their feces so that very well.

They can break stuff down to about nothing.

So as a result what we do is we use this data to determine is an animal unit month.

And an animal unit month is basically trying to figure out how much forage is required to sustain an animal.

It doesn't matter what it is.

There's AUMs or AEU's that's an animal equivalent which is basically anything that we would forage.

So for a cow one AUM is a 1,000-pound cow and her calf 1 how much she's ghost to consume, 750 pounds of dry matter per month.

Horses are a 1.25, they consumer a quarter more in a month than a cow, a 1,000-pound cow.

Again, that likely is attributed to their digestive system and the way they process their food.

Sheep, these little animals be .2.

They have a very small amount.

You can find these data for bison, for elephants, whatever.

You can find this out and identify exactly what these animals are going to do to a system, knowing that animal unit in a month is really important when it comes to identifying stocking rates.

And I think I've got a slide coming up.

I'm just going to say it now because I'm in the mood.

AUMs, I teach this in my class, a class called rangeland planning and GIS and in that class we spent several days, teaching the students how to calculate a stocking rate for sheep and for cows in central off the.

I take them out.

I show them the area where they have to identify how much is going to be used.

They also have to calculate how much it would take for an elk which is, it's an.

UE lower than a cow, and for a deer.

I think elk are .7 and deer .35, something like that.

What they do is we look at the range and have them identify what is available for this site.

How much forage is out there.

They don't do this but this is done through ecological site inventory.

There's a value that comes out that says how much forage is there potentially to be consumed.

These students then take half, saying they're going to use proper use, and you don't want to have animals con soup everything.

You take one-half of it.

From that you determine how much the wildlife is going to use.

You determine from that how much you have leftover for cows.

Or sheep.

And you can determine the exact number of animals that can go out and persist on that

site without causing rangeland degradation.

This is a point I drive so hard to these students because if they're going to be effective managers they've got to know that stocking rate, and that number is not something you pull out of your head.

You can come up with a very specific value so as you manage these lands, you know what it can handle, you know how much you can take off in the different groups of grasses, forbes and shrubs.

These animals do not eat them the same so you can't consider it one big plant community.

It has to be broken down and classified by what they eat the most and the limiting factor, for cows the limiting factor is how much grass is out there.

It's not based on shrubs or forbes.

From that you can get a real good assessment of the animals that can be put out on that site and away you go.

One thing I was going to mention in an earlier slide about grass that just came to my mind is that the timing they get bitten is big.

When they're in that growing stage of producing that Florence, the seed part of it, if we can back eye couple more slides, right there, that upper morgues, when it's growing into the point of maturity but not there yet, that's when a plant is most vulnerable.

When you're biting them during that time period their susceptibility is high compared to when they're dormant.

If you can put animals on a site after the plants have already dropped seed, and this is again for perennial plants, definitely annual plants, they have allocated resources for reproduction.

They begin to store carbohydrates.

The plant is not as nutritious during that time period but it's not going to affect the plant nearly as much in that sensitive time before they go to the boot staining of producing a viable seed U., just as a thought.

Back to where we were.

Here's another thing to think about.

So how an animal bites its food is another critical element.

Sheep have got these great little tiny -- not tine, sheep are tiny, but little teeth that have front incisors, front and bottom and they'll nibble, and they'll nibble on a plant and continue to nibble it down as far as they can get ahold of that plant even to the point of the root crown.

Therefore, moving sheep through a system is very important because otherwise they can really do damage on the desirable plants, and they're not dumb animals they're going to pick out their favorite stuff, and often this favor stuff is our favorite stuff we like to keep there.

They can bite it down to where it can cause damage in the long run.

And we've got a long history of that in the United States, especially in the west of where we've seen that.

Horses also have the kind of teeth pattern where they can bite things down to the ground, so making sure they do not bite the thing to the point of no return is critical. Cows on the other hand do not have that kind of a form of tooth, teeth arrangement, dental arrangement, so therefore they have this adaptation of using their tongues and they will wrap their tongue around a plant and yank on it and rip that plant to pieces in half and then that's all they can do with it.

So by nature, by the biting mechanisms of a cow, plant residue gets left behind for other animals that have both front and top biting mechanisms.

It can leave material behind but you've got to be careful when you're running those kind of animals on a system like this because they can bite it down to a point of causing problems for the plant.

Next slide.

So again here's a picture of the long history our west.

And we used to graze sheep by the thousands, and the impacts of that have been long lasting.

I had a professor at Oregon state who said the reason you don't see idle fescue in a lot of your plant communities now is because it's actually a remnant of the early 1900s when they got chewed out so bad, these plants still are on the rebound.

I think that's a fascinating thing, that the things that we do now can have long lasting effects on a system.

Which leads to this next slide which is just such an important slide.

Sights very meaningful.

I hope I can portray what is there.

These systems persist in what we call states.

There are natural dynamic process and patterns that occur within an ecosystem where, and range lands being an example of this, there are shifts, we call it community shift where you see an example of the top one p.

Here's your sagebrush.

With time it can go to a Ceral step that initially starts as grassland.

Shrubs move in after that.

Shrubs can move into woodland species like Juniper.

As long as fire is there or mechanisms that drive night a natural system of cycling through from early to Ceral plants that is a natural state and natural dynamics you expect to occur within a state.

Pressures, disturbance, whether it be grazing, whether it be drought, there's a whole list of things we could say that could drive a system into a trajection, they call this a transition, they can lead it away from that cycling that occurs within a state.

Over time of it can cross a threshold.

Thresholds are important.

Before I get to thresholds, though, a state consists these dynamic ecological process of hydrology, energy capture and nutrient cycling, that is what drives a system to function adequately within a state.

Sometimes when they start getting out of whack, you leave a plant like a Juniper tree in the west stays on a site too long, the site is dried out and it begins the outcompete other species.

If it's left there long enough it gets to the point where fire becomes a factor where they cannot burn.

They become fireproof because there are no other stories to drive it.

We talk about invasive species of grasses.

When they get into a system they can completely change the dynamics of that system to the point where unless there is significant human intervention, resources dumped into it, it will not go back to that previous state.

That is a crossover threshold.

Those are driven by different process meaning hydrology, energy capture and nutrient capture are is not what they used to be back and the only way to get it back is by dumping a ton of time and resources into it.

Next slide again another one that was developed in a paper in 2003, another paper that could keep you up at night, it will give you great happiness.

City transition modeling and ecological process in general range management.

It's a great paper.

I would say that this is my HPD, after her Ph.D. work.

It's a great to know how systems operate.

I've got to keep it going.

Next slide.

And I have the gift of gab and please stop me when I'm getting out of line.

20 minutes okay.

So here are my grazing management strategies about this.

You've got to carefully determine stocking rates.

Knowing your AUMs, what a site can handle, and I'll talk a little bit in a minute about AML because it ties into that whole sketch AML and thriving ecological balance.

Knowing your stocking rates and knowing what a site can handle is going to allow you to make some decisions that will give you success, which when I say "success," it's protecting the planned, protecting the plants that exist there and not allowing this idea of transitions to occur or to cross thresholds because there's nothing more, nothing sadder in life than going to a site that has crossed the threshold because you feel like you've lost something, and to be able to get those back is tough.

If you've been to a lot of these places in the west and you see, like I was telling you about that one picture of Cheatgrass, it's a sad state of affairs when you get on a site

and all you see is Cheatgrass when you know historically there was a great mix of sagebrush and forbes, some interesting grasses that were there, and now they are gone.

And the process that drives that at that point becomes different, a different circumstance, and Cheatgrass on these sites, it becomes a fire-driven site.

They will burn way more frequently than has ever been on that site before which keeps the perennials down and out of the system, it keeps these annual, Cheatgrass being an annual grass from the Mediterranean area that has really gotten into some of our low elevation dry sites in the west.

You don't want to cross that threshold if you can do anything about it.

So to develop plans to be a good and effective land manager, these are some things you can do.

You can do what's call deferment which is you delay the grazing until that plant reaches its maturity.

I was telling you about the stages of grass growth, and I emphasize grass because a lot of our grazers after.

We've got grousers that will go after shrubs and those need to be carefully thought about as well, and there are different responses to the point of the cushion, but the grass in this case is what we often find really relevant where grass is a forage base, it's also really critical for protecting soil.

I cannot say enough how much grass contributes to slowing water movement down a slope.

This goes into this watershed concept that if you've got a surface of plants that are holding the ground stable with their roots, which they will do, some are really good why riparian sites, sages like Nebraska sage, that is such a key plant for maintaining your ripe air if it gets upset.

You pull out critical bunch grasses or Azomatous grasses, you're making that site accessible to wind erosion and water erosion.

That will take your soil surface and put it into that creek that will be deposited downstream, and if that goes on long enough you will lose the horizons because the time frame to produce soil is not in a management time period.

It is in the state of decades to thousands of years.

So once it's lost, the ability to return it may require thousands of dump trucks and a lot of people shoveling dirt on a slope, and which is not realistic and a stupid thing to say but I couldn't help myself.

Protecting and preserving soils at a watershed level are fundamental thoughts about range management.

So deferment is delaying your animals from biting your plants until that plant has reached maturity, in this case it goes dormant and then have at it, and the system usually will not even respond negatively to that at all, and I've been to a number of

places in eastern Oregon where they would range these sites after the plant was dormant in the late season, and the amount of material, the wolfing material left behind of those sites not grazed, those sites were, for lack of a better word, poorer condition than those graded moderate but with the right timing compared to those down creek that had not been grazed with the right timing.

You graze them heavily during grass growth and production, those sites, you see a lot of barren soil around the edges, you see a lot of erosion and unstable banks to these riparian systems which is unnerving.

Rest.

That is the non-use for a full year.

That's taking your animals off.

You give them a chance to completely recover.

Rest is a very fundamental thing to think about.

It benefits the plants and wildlife.

And then this idea of rotation.

You move things around, so a common practice is called rest rotation where you move your animals from one area to the next which gives the site a year to recover and then you can put them back on.

And good managers will know what a site can handle as far as how much time they need away from being grazed versus put back on again.

And so here when we think about horses, I like this slide.

I just think it's fascinating to think about where horses came around, what they started out as.

Here they are at the bottom.

This is what I read so highly probably butcher these words but Hyracotherium or Eohippus that took off 60, 70 million years ago and away they go over time.

That whole evolution occurring in North America.

A few branches where they tried to get over to the old world and didn't make it until about 11,000 years ago and the next slide, please, 11,000 years ago they are lost from North America.

Up to that point horses, they believe, there could have been three, maybe more species of horse that were living in North America at the time of their demise, whatever you want to call it, they were no longer found in North America.

They believe that the ice age, ending of the ice age at that time period allowed horses to move over the Bering Strait into the old world.

They got a fossil record database from 6,000 years ago in Ukraine in Kazakhstan, that's where they find horses.

Then reintroduced in 1493, 1512, depends on who you talk to, and they're back.

So back in that day horses were the most common and abundant grazer -- let me say these words right -- most common and abundant grazer in.

We had woolly Mammoths, camels that evolved here as well.

There is a list of camel fossils.

If you go to Washington, D.C., and go to that the natural history of museum they've got that excellent display of the evolution of horses.

You ought to go right after you are done reading the paper on state evolution theory.

As well as these other large grazers.

They also had large predators that were probably keeping these animals at bay.

There is not a lot of data I have read about.

We don't have a good feel for how dentition of horses existed back then.

But we do know saber tooth cats and American lions were changes these animals around the range.

Today we don't have those predators.

We have of a difficult set of conditions.

These planned communities have gone through changes over time.

We know what used to be limber pine forests are now P.J. forests in a lot of lands in the west.

These grasslands have gone through change in time.

Bison in the tall grass prairie were definitely an influence.

From the things I've read west of the Rockies, bison were there but not nearly as much of an influence in the tall grass and short grass prairie.

So how plants have dealt with grazing from large herbivores over the last 10,000 years is up to debate.

But my guess is it's not nearly as much as what we have seen in the past.

Currently with our live stock we put out with horses, herbivores, we need to be thought of about what these systems have gone through and where they're at currently and how much they can handle as far as potential impacts.

So just quickly to make that statement that AMLs are set.

From my time working for national academy of science on the report, the idea is you set up an AML to do this, to balance horses and burros with wildlife, wildlife, livestock and wilderness and recreation.

And manage a thriving natural beam.

That's hard to tackle and make sense of.

But the idea is you're setting your stocking rates to manage these sites for natural ecological balance, and I would prefer to use these ideas of states and transitions which make more sense to me.

So some of the work I've done.

I'm going to go through this quick so I have time to answer questions.

The Sheldon national wildlife refuge is up in northern Nevada p we have done a lot of work on horses as well as sage grass.

Top corner of the state.

Next slide.

And here's an exposure.

In 2008 we put p these ex closures with the idea that we were going to see what happens over five-year time period when horses are taken off of these sensitive riparian areas as well as up land.

The upland sites are right next to the riparian areas, keep this in mind p.

It's right next door.

It's not way up in the mountains.

Just visually you can see what happens when you start to restrict the use of horses on these lands.

There's definitely a consumption of grasses and sages in this case.

Also a trampling effect.

The body weight in the form of the foot of a horse will allow for impaction.

Some of these under lats have a different way of stepping which actually takes off some of the pressure.

Not pressure.

The compaction factor when it goes into looking at the effect of horses standing on these areas.

All these things go into assessing these lands.

Next slide.

Here's another one.

This is more of the upland at that fence showing you this fence line effect.

It just gives you an idea of the kind of response the site will have when taken off of grazing.

The Sheldon does not allow livestock at all on their lands so when I say grazing lie large herb herbivores, it's strictly horses.

They could have prong horn that could potentially be eating the grass and the prong horns are able to jump those fences or go through them or under them.

This is not my data.

Kirk Davis, Chad Boyd and Gail Collins, two of those from the ALS in burns war Oregon have done this work.

It's the data from those exclosures.

What it's showing you is that as far as density there's not a huge difference in the density of plants you see there, whether that's because the effect of horses is less or if the amount of time is not enough, that's to be determined, and read their paper.

Go through their paper when it comes out.

That will help explain that even better.

For cover you can see slight differences but statistical speaking there was no difference between the exclosed sites and the non-ex-closed sites for cover.

Next.

This one is showing shrub response.

On the left you've got grazing on exclosed sites.

The big sagebrush.

As far as the cover of that plant goes, there is no difference.

All shrubs combined.

On the right side is density.

In this case there is a difference in the mature big sagebrush plants.

The horses are having an effect on, and we're talking about five exclosures with again multiple transects.

It's a very well replicated state.

This is a good group of scientists help so it is affected by the nature of horses being present.

Next slide.

And then this is has to do with soil response both in soil aggregate and in the penetration of soils due to likely again the compaction of trampling of horses.

There are differences in both of those, that the graze sites had a less stable, which you talk about stability indices, a less stable soil aggregation, and a more resistant, a more resistant penetration.

So compaction and horse movement was having an effect on these sites.

How that response to these plant communities long-term is an important thing to be thinking about as far as management.

Next slide.

And outside exclosure.

Again, when you have animals highly concentrated, this wildlife refuge has had 1200, 1300 horses in the past on their refuge, and again as far as bands scattered all over the refuge, the response right up by the riparian system can look like this where it does get hit pretty heavily, and again it has to do with the number of animals and how they are able to persist and stay on that site and graze it.

We were curious to know how that would look as far as what the animals are eating.

This is a student who took vegetation samples as well as hair samples from horses and did stable isotopes to find out what the horses were eating because that tail hair works as basically a chronology of consumption of their diet which is really cool stuff to think about.

So you can actually find out what they're eating over time.

And what we found out is that the grasses you would expect are being consumed, there's a variety of those that were showing up in that tail hair sample.

But also sagebrush was showing up in their diet at certain times of the year.

So they are, we know they could be trampling it but they are eating some sagebrush because it's showing up in their diet.

We have been testing the use for collars to get a feel for how they work.

We wanted to use safe collars.

We have a paper coming out in two weeks in the journal on efficacy of collars on horses.

That will be September 2nd.

I'm excited.

Any way we put these collars on these horses to see where they go and how much land they use.

I shouldn't have used green.

That isn't helping.

That right there is about a three to five to ten mile, the whole thing is about ten mile diameter, and those little green dots are GPS recording from our horses.

It's on a lead mare of a band.

The blue one is on a different lead mare, the yellow a different lead mare.

These horses, the green over the better part of a year.

Green and yellow over several months.

The fact this these horses hardly went anywhere during that time period.

If horses have access to water, if they have access to forage, they, in this case they were not wandering very far.

I've wandering.

I deal with people in Australia that have Brumby.

They have over 1 million Brumbys on their rangeland and the influence of stocking rates of Brumbys is fascinating.

In certain areas where water is limiting these horses are going at least, over 20 kilometers a day to go from where they forage to where they drink, and the ground in between there is not in good shape.

And it has to do with just a lot of animals and how they cope with the resources available.

And like in this case in northwestern Nevada where you've got out of resources for them, they may not go as far.

However in those sensitive washers the riparian system, they may be putting a lot of pressure on those sources.

Which those pictures do suggest.

Next one.

Five minutes.

I'm out of time.

Here's my different graduate student looking at horse-wildlife interactions.

What we found out on the next slide is that in the red are horses present at our water sites.

In blue is prong horn use.

And either what we're seeing is that horses when they show p, pronghorn leave or they

take turns on the on the righty you see a shift.

When the horses are there, the pronghorn tend to leave and vice versa.

Next slide.

This is a fellow -- not a fellow.

These a graduate student who is in my left at BYU.

They are doing work out in dugway in western Utah.

His design to look at water resources really to get a feel for how much these guzzlers or springs are being used by wildlife.

They set it up, though, in areas where they had horse excluded and horse included areas, and it turned out the horses did drive a lot of the wildlife interactions that were going on there.

There were a total of 75 species of wildlife that were included in photographs as they were taken with cameras at these water sites.

Any time anything moves into that area, it takes a picture of it.

So poor old Lucas Hall has spent hours and hours poring over thundershowers of pictures.

Bless his heart for doing that.

But as a result of that trying to figure out what does happen when you have horses competing at limited water sites like that with these different species.

Their main ones that he talked about were mourning do you have, pronghorn, black finches, birds, mammals, magpies.

And these are significant statistical, that the number of species that show up in horse. Excluded sites are about 22 to 23, and included sites it's around ten to 12ish.

Next slide.

Here's index that talks about how species is going to be -- in excluded sites there's a greater diversity of species that occur there versus those where horses are included.

Next one.

And then here is one that shows horses and wildlife in the lighter green, horses in darker green, and the temperature.

When the temperature goes up, the number of times horses go to these water sources goes up, whereas for wildlife they have to just kind of balance around that.

So again I think what we take is the take home message from this is you've got really think about where these animals going, what they're using as far as the habitat, and what potential effects they could have on wildlife species.

And then one more slide.

This is all in review and it should be published relatively soon, this data.

So finally here is the number of visits.

These are visits from wildlife at these water sources, horse ex secluded, there were 1300ish again.

Where horses are included it's down to 200 to 300.

So the take-home message from that is apparent.

Greater sage is the burning topic in the west.

It is of great importance, the thought is are horses and sage corrals, what do we know.

The answer is there's work to be done.

My thought is horses do potentially impact sagebrush.

They may be eating it and trampling.

Sage grouse require sagebrush for hiding.

The grasses are a fundamental part of hiding a bird.

If the coverage goes down, there's a lot of data out there that says that grouse are not successful, either they will not nest or their nests will be raided and the survival of the nest goes way down.

And then finally in the riparian system if you've got areas where birds do use wet meadows and they're being heavily grazed on, that's a concern.

There are some stories of great success.

Turns out one of your committee members here was done some excellent work up in the desertland livestock where they have shown that grazing and sage grouse combined, you can do this.

If you manage it carefully you can have success, you can have bird numbers go up, and you as a group ought to grill him on that because I think it's an important topic.

I've got stop.

Finally you need people who knows their business, you've got -- take a look at that last one.

I promise I'll stop after this.

I really will.

Technology.

There's so much good technology and development going on that can used as tools to help classify and assess rangeland.

I think I have left you no time at all for questions.

I apologize for that.

>> Boyd Spratling: I appreciate your coming in and giving this presentation.

I think we get so hung up at these meetings, you know, with discussions back and forth about the species that use the rangelands, and it's a constant battle about livestock use, horse use, lifestyle use.

But the true basis for all of it and the foundation sustainability is coming from the rangeland to help the soil, the plants and everything else, and that's why we invited you to come speak to us at this meeting.

We felt it was important to start, along with the other reports they received, I think it's important that we get some education for not only members of the board that don't have a lot of range background, as some do, a lot don't, and member of the public to understand these processes, and that was the reason we asked to you come, and we

really appreciate you coming and doing that.

>> Steven Petersen: Thank you.

>> Boyd Spratling: A real quick question or two anybody.

>> Yes.

Thanks.

The importance of how the different species utilize the range, pun of the things that I have asked about since I became a member of this board about four and a half years ago was the utilization of range, the differences between horses and cattle, the things, and I've heard a lot of things.

I have heard some people say, well, horses pull the plants up by the roots and cows don't, but then you just talked about how cows pull -- I have had cattle on my place back east as well as horses, and I've watched the cows grab a clump of weeds and the roots are hanging out of their mouth.

I guess it depends on the situation.

But the other issue is browse.

I know that my horses browse a lot more than the cows did.

And so in establishing the AUM allocations, do you think it would be -- it seems to me it could be very prudent to establish the AUM not just based on one species, which it seems to be now, it seems to be AUMs are defined by how cows use the land and AUMs are defined, the horses aren't take into consideration, the different utilization of horses on the range.

Do you agree with that.

>> Steven Petersen: I could go on 20 minutes for that but I will say this briefly, that is when we teach students about AUM calculations we are going to break these down into these fundamental of shrubs, forbes and grasses and we look at the diet of every individual animal on that prank so for deer we have it broken down into percentages of how much they use in the summer months and in the winter months because they'll shift their diet.

>> The changes.

>> Steven Petersen: So any animal that has a shift, I teach them to calculate that into it. For a horse, absolutely you need to know the percentage of each class because you want to know when they're biting a plant what are they eating, what percentage of that population of species that is there are they going to con soup, and then from there that's how you determine what's available for them and how many animals you can put on that site, and if you did not have that data, it's going to come back to them eating more or less than what you understood.

If you thought they were eating less grass and more forage, then you might overeat your forbes because you haven't calculated into the whole number and you may overstock based on forbes and it will have a negative impact on that group of plants. I agree with you, you have to know how these animals are going to utilize that

resource, landscape level, because if not you are going to potentially have an impact. The cushion is that you do that proper cues concept of taking off 50% from the beginning.

You say we're going to conserve 50% of our resource.

The idea has been out there for quite a while.

You could argue whether it's less or more.

It's just to be on the safe side.

And from there you should be able to manage these sites so you're not pushing the it to the point of no return or degradation that's irreversible.

Did I answer that question fair enough?

>> Yes.

>> Boyd Spratling: If we have a comment, we can refer those until -- a question.

Okay.

Go ahead.

>> The study that you used with the effect of the horses and the watering hole and all that, that was site-specific.

You didn't mention how many horses were on that range.

Do you have any idea of the number of horses that was on that range?

I'd like your idea or your opinion on, you know, I believe you can't manage the whole horse herd by just one spot, and I'd like you to comment on that, if you would.

>> Steven Petersen: It goes right back to the idea of strong stocking rates.

What a critical thought of knowing the density of animals on a site is in my mind one of the most important concepts we talk about here.

Like I said for the entire Sheldon which is over 1 million acres in size, there were 1200 horses there.

For dugway, and this is again Luke Hall is the PC student, Brockland Milan is his adviser another BYU, they're the ones doing the study.

I asked Luke how many horses are in this site?

He said there's about 300 animals in that area that are in the horse-included portion that of landscape.

How they are sorted out by band I couldn't tell you.

We don't have collars on them.

So, yeah, they're going to come and go.

As far as if water holes, he can give you the exact data.

He's not looking at every individual horse, though.

He's got cameras saying today we had eight horses in this group.

This one has 12.

Whatever.

So he is tracking the numbers at each of those guzzlers or water sites knowing that it's from a population of 300 animals.

>> Boyd Spratling: I think we are going to have to defer comments to the board when we do our recommendation concerns.

>> Kathie Libby: That would be great.

Unfortunately, because the public comment period is scheduled at 1:00 right after lunch we don't have flexibility to start at 1:15.

We will start at 1:00.

And it would be lovely for you to all get some lunch.

When you come back, I would say in the public comment period -- I'll check with Sarah -- but you're probably two and a half minutes.

We've got about 94 people.

Two minutes.

Okay.

So practice up because you've got two minutes if you're going to do a public comment this afternoon.

Enjoy your lunch.